ENVIRONMENTAL DEGRADATION: LINKAGES TO HUNGER/U.S. FOREIGN DISASTER ASSISTANCE PROGRAM

HEARING

BEFORE THE

SELECT COMMITTEE ON HUNGER
HOUSE OF REPRESENTATIVES

NINETY-NINTH CONGRESS

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THURSDAY, JULY 24, 1986

HOUSE OF REPRESENTATIVES,
SELECT COMMITTEE ON HUNGER,
Washington, DC.

The select committee met pursuant to call, at 9:40 a.m., in room 2212, Rayburn House Office Building, Hon. Mickey Leland (chairman of the committee) presiding.

Members present: Representatives Panetta, Fazio, Dorgan, Roukema, and Gilman.

Also present: Representative Wolpe.

OPENING STATEMENT OF HON. MICKEY LELAND, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS

Chairman LELAND. Good morning. I am pleased to call this hearing to order and to welcome guests, witnesses, and congressional colleagues. This select committee hearing will benefit from the participation of Members of the House not serving on our committee. Though they have not been on the select committee, these Members have nevertheless been providing leadership on the issues we will be looking at this morning. We look forward to their participation.

We have two important topics to examine today, two issues of central importance to hunger alleviation efforts. We will be looking, first, at the implications of environmental decline and natural resource mismanagement on the food security of millions of poor and malnourished people. Also, we will be focusing on the U.S. Government's Foreign Disaster Assistance Program and the need for enhancing that program.

The 1984–86 African famine crisis underlined the human consequences of environmental decline. Famine has, of course, many complex origins and causes and the crisis did not rise solely from environmental decline. But there is no question that massive deforestation, the growth of the desert, the loss of the topsoil, and the destruction of watersheds across the sub-Sahara contributed heavily to that tragedy.

In large areas of the developing world the stage is being set for serious drops in food production and economic decline by natural resource mismanagement. As the soil is lost, productivity is destroyed, farms are abandoned, people are left with no means of securing an income or feeding their families. We can see famine

being created. We can envision a frequent repeat of the horrible suffering endured by the children of Ethiopia and the Sudan and the other countries.

Human hunger and malnutrition have many causes. The solutions to the problem are not easy. How much more difficult will the task be if, in region after region, country after country, the trees are lost, the soil eroded away to rock, the rivers and lakes dry? The picture is a bleak one. The very ability to feed people is being lost in vast areas.

The select committee is looking at environmental decline not strictly in environmental terms. We are concerned about the consequences in human terms of the decline now underway. We have three expert witnesses today who can address this critical issue and give us some guidance on what the U.S. Government and others can do to reverse this decline.

Let me now turn to my colleague, Mr. Gilman, who has an opening statement.

OPENING STATEMENT OF HON. BENJAMIN A. GILMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. GILMAN. Thank you, Mr. Chairman. Mr. Chairman, I want to thank you for arranging this timely hearing. The issues it proposes to cover are of great importance, not only to the future of our own Nation, but to the future of Africa and to the sustainability of our own productive potential as to how we as a nation can be counted on to respond in the future to the devastating type of disasters that have been confronted in that part of the world in the past.

Man's struggle for food has been destroying the very land on which food has been grown, and our U.N. Environmental Program estimates that in the next 15 years the world is going to lose some 10 percent of its cropland and will lose double that area of rangeland in forest. Meanwhile, the natural resources that are needed to increase food production, soil, fresh water, and forest cover, are being exhausted at record rates. There is much less cultivatable land per person, and it is rapidly diminishing.

In 1974 the world population was almost 4 billion, with an average of 0.355 hectares of cropland per person. Now there is less than 0.3 hectares per person. By the end of the century there will be some 6 billion people and only 0.24 hectares of cropland per person. In sub-Saharan Africa, overgrazing, firewood gathering, overharvesting of trees, overcropping of fragile soils is crippling permanently the local resource base. Due to these deadly combinations, large chunks of the Sahel are rapidly turning into desert lands.

Desertification now threatens over 2.7 million square miles of the Sahara. Ethiopia, alone, loses about 1 billion tons of topsoil each year. The United States, with six times the land area, loses a comparable amount each year. One hundred square miles of land a day in Africa turns into desert, and that is permanent. It is, without a doubt, the 11th hour for the African resource base and for its environment. Along with subsistence farmers, nomadic herdsmen have been forced from their traditional ranges, and in some cases they have had to graze their herds on ever-shrinking parcels of land or

on land that does not have the necessary forage to support livestock for any appreciable length of time.

In other instances, at the behest of national governments and the support of multilateral development banks, cattle not native to the region have been introduced for the sole purpose of producing exports. These cattle require much more forage than do native livestock. As a result, they have denuded the land of vegetation. In addition, because they are not indigenous, they are not used to the severe climate. They are incapable of standing prolonged droughts without drawing heavily on already limited water supplies. There is a growing consensus that the most effective and least costly way to begin reversing these disastrous trends is by sponsoring small-scale, self-help projects which utilize appropriate technology and agricultural methods best suited to the local environment.

These technologies should be low risk, resource conserving, small scale, and locally reduced and repaired. In many instances, projects of this sort have been designed and supported by private voluntary and nongovernmental organizations such as OXFAM and UNEF, which work closely with local governments.

H.R. 2782 is legislation that I introduced, which has the support of my colleagues on the committee, and the African Subcommittee on Foreign Affairs, will be holding hearings in 2 weeks, and provides precisely this approach by authorizing direct assistance to small-scale, resource-conserving local projects that offer promise of quick and effective implementation. Special emphasis is placed on grants to international, African, and U.S. nongovernmental and private voluntary organizations on appropriate activities that have proved successful in the past. Activities such as reforestation, erosion control projects, small-scale farming, and energy production.

The bill also stresses strengthening the agricultural extension services of the African nations so that the African people themselves can deal with these issues over the long term. While America's response to disasters has always been admirable, it has not always been correct. The long and growing trend toward big projects and more research needs to be reviewed. The knowledge and skills needed to help Africa feed itself are not solely on corporate drawing boards in the laboratory or in economic textbooks.

Many of the answers are bound up in the traditional African farmer herself. The extent to which we help facilitate the unfolding of the African farmer could perhaps be the true indicator of America's creative input into solving Africa's problems. Mr. Chairman, it is for that reason that I look forward to hearing from our distinguished witnesses, and I hope they would comment on our proposed legislation. Thank you, Mr. Chairman.

Chairman LELAND. I thank the gentleman from New York.

We will now proceed with our witnesses. Let me introduce Mr. Brian Walker. The select committee is extremely pleased to have with us today an international spokesman for environmental concerns. Brian Walker is the president of the International Institute for Environment and Development. The name of the institute is rather significant. It is the linkage of environmental and development issues that is critical and that is sometimes missing in the debate.

Brian Walker was the secretary general of OXFAM, the largest private development and disaster relief organization in Great Britain. He also served as the chairman of the Grants Committee for Bob Geldof's BandAid Trust in London. Mr. Walker has extensive experience in development, relief, and environmental protection programs around the world. He has devoted a number of years to Africa's particular problems.

Mr. Walker will identify environmental problems we face and opportunities for reversing these frightening trends. We welcome you to the select committee, Mr. Walker, and appreciate the efforts you made in crossing the Atlantic to be here with us today.

STATEMENT OF BRIAN W. WALKER, PRESIDENT, INTERNATIONAL INSTITUTE FOR ENVIRONMENT AND DEVELOPMENT [IIED]

Mr. WALKER. Honorable Chairman, it is a great privilege to be here, and thank you very much indeed for that warm welcome.

In my written statement, I explain initially the objectives of IIED and our style of operation. I register the caveat that in taking evidence from expert witnesses, all of whom, like me, will be using statistical evidence to justify their arguments, you should bear in mind that there is little intellectual underpinning to much of the data used in respect to the Southern Hemisphere, and that is particularly true of the continent of Africa.

I draw your attention to the recently published World Resources 1986 report researched by IIED and the World Resources Institute, WRI, which aims to help correct this weakness. You may care to consider why many governments do not know the key data indices of their own environment in terms of soil, water, food production, populations and the like.

In section 2 of my full statement, I consider the three key introductory points. First, I urge you to advocate the need for balance in aid and development programs, rather than growth. That is as important in the North as evidenced by U.S. farming bankruptcies and the gross overproduction and heavily subsidized agriculture of the European Economic Community, as it is in the South as evidenced by widespread malnutrition, famine, and death from starvation. Global malnutrition and starvation account for a daily hemorrhage of an estimated 90,000 human beings. A further 30,000 die daily from lack of water or from water borne diseases. The death of an estimated total of 120,000 people per day, a significant proportion of those deaths are children under the age of 5.

Second, I argue that governments and people cause environmental degradation and, hence, malnutrition, rather than God, nature, or the climate. I reserve a contrary position for the exception of the thin belt of Sahelian countries in West Africa.

Third, I remind you that your own country and North America in the whole, underpins world food supplies. With strategic reserves never exceeding 34 day's supply in postwar years, the world community is therefore vulnerable. Last week in Finland at the annual meeting of the International Federation of Agricultural Journalists, the key debate centered on whether it was possible to avoid world starvation during the next century. The signs were felt not to be propitious.

Next, I consider the following key environmental indicators. Population: by the year 2000 the world population in excess of 6 billion will demand 50 to 60 percent improvement in food production over 1980. A hundred years later by the year 2100 at present rates, we shall need to sustain well over 12½ billion people. Africa is exploding at the rate of 3.01 percent per annum, with Kenya having the world's highest fertility rate of 8. From a prehistory growth rate of 2 percent each 1,000 years, we are reproducing ourselves at 2 percent a year today.

Water: 97 percent of the world's water is seawater, virtually useless for human population, livestock, or crops. Of the remaining 3 percent, 1 percent approximately is frozen on the North Pole, 1 percent on the South Pole. We survive on the remaining 1 percent, yet we abuse, pollute, and waste water daily. In Africa, a country like Mauritania, which has lost 70 percent of its land to the desert, is now facing total extinction.

Climate: The greenhouse effect threatens to increase sea levels on the one hand, alter agricultural boundaries on the other, regardless of sovereignty.

Soil: Few governments know what is happening to the ground beneath their feet, and yet we are losing topsoil at the astonishing net rate of 25.4 billion tons per year. The losses are equally severe in both hemispheres, but Brazil, Central America, the Philippines, and Indonesia are particularly badly affected in the South. Globally, and this is the key figure, we are losing serviceable land to dry lands and deserts at a rate of 0.2 million square kilometers per year. As populations grow, both human and animal, this will accelerate.

Tree cover and biomass: When tree or vegetation coverage removes, soft soil degenerates or erodes. Either it is flooded and becomes saline as in Bangladesh or Ecuador, or it dries out and is carried off by the wind as in Guatemala and Ethiopia, or it is washed down river to silt up dams as in Egypt, or to be lost into the oceans as in Vietnam or India.

When forests are cut and not replaced, people take crop residues and animal dung for fuel, thus starving their soil of essential nutrients as in Pakistan and parts of India. An estimated 400 million tons of dung are burned annually in this way, depressing grain production by 14 million tons per year, an amount greater than the food aid provided annually to the developing nations of the world.

Since 1900 forest cover has declined by 30 percent and is accelerating in the South, although the loss is slowing down in the North. In southeast Asia alone, 25 million acres of forest cover have been lost. Despite this, Mr. Chairman, only 5 percent of global aid to agriculture goes to forestry.

Desertification: Every desert in the world is believed to be expanding. We estimate that by the end of the century, land loss to desert will account for the loss of half a million genetic species. Eighty percent of a country like Australia is dry land or desert. In 1980, the per head of population allows only 2 hectares per person of serviceable land. That is simply not viable, nor is it static. It worsens daily.

This depressing picture holds good across fisheries, energy, and marine life. In spite of some impressive development success out-

lined in part IV of my statement, Africa is the worst case. In addition to our unparalleled assault on our biological carrying systems, my paper identifies the following: Armed conflict, political corruption, inept bureaucracies, the shortcomings of agricultural research and the relative failure of the Green Revolution, trade imbalance—we took more out of Africa last year than we put in. The inappropriateness of much aid, including cash crops versus food to eat crops, and the phenomenon of merchants selling grain in substantial quantities in famine conditions as food aid is levered into the country in question are all among the key issues to be tackled if we are to secure global food security.

Above all, I suggest that we must recognize poverty as the great dynamic for perpetuating inadequate food production, and ensuring that poor communities continue to rape and destroy their own environments.

In the final section of my statement, I argue that we can reverse these trends. Science, technology, and wealth are all in place. It remains doubtful, however, whether we have either the political will or the appropriate ideology. I make a special plea for the following: that family planning should be culture specific if we are to reduce human pressures on the environment; that for aid programs to be environmentally and economically sustainable, people themselves, must become self-reliant, local resources must be recycled sustainably, pricing structure and distribution systems should favor the rural poor producer rather than the urban elites. Agricultural research and its extension services should also be culture sensitive.

Relatively new techniques like alley cropping, intercropping, and microwater harvesting need developing and replicating. Reforestation and dry land farming should be given high priority, and above all we need to tap the collective power, ingenuity, and skills of the poor themselves. Successful aid is by people and not for people.

My final point, Mr. Chairman, is that the quality and effectiveness of aid must begin predominate over volume aid flows. Another billion dollars down the aid pipeline secures nothing. In the North, we need to press ahead with the development of renewable technologies, in the South with political stability as the prerequisite to increase food production. Science and technology, therefore, must be used to secure balance rather than growth if we are to revert global hunger and widespread malnutrition during the next century.

Thank you.

[The prepared statement of Mr. Walker appears at the conclusion of the hearing, see p. 58.]

Chairman LELAND. Thank you very much for that statement, Mr. Walker.

Let me ask you, to what extent are environmentally damaging agricultural practices a result of the African governments' policies? Perhaps it is the lack of policies?

Mr. WALKER. Well, there is a section in my statement, Mr. Chairman, which looks at two of the areas that I have highlighted, particularly in Africa; that of armed conflict, and I list in my paper the number of coups and wars which have been sustained in Africa. I think you will find this—if I can find it myself. In paragraph 2.12 and the propensity to sustain armed aggression both

inside countries and between countries is a major factor in perpetuating the instability to which I referred in my opening statement.

Second, the inability of African governments to avoid serious corruption in the work of accumulating statistics, attracting aid flows, dispensing that aid flow effectively in Africa, also add to the problems that they encounter, and until those two elements are removed, it is hard to see how real progress is going to be made.

On the other side of the equation, of course, is the point that was referred to by the member earlier that the aid agencies have to somehow find a more effective way of handling the aid for which they are accountable, and that, I would suggest, and the whole thrust of my paper, is in favor of people developing people as communities and working at microcatchment small-scale local technology level. I think those two areas have got to be brought into place before we can see real progress in Africa.

Chairman LELAND. Do you see any evidence of a trend that the governments are responding in a more positive way, in the way that you consider appropriate?

Mr. WALKER. Well, I think there is some evidence that the key political leaders in Africa are beginning to look in terms of a slightly longer future for themselves and their people, rather than how do they secure and retain power for themselves and wealth for their personal families, and I think there is some evidence that some steps are being taken in the right direction.

For example, I think some of the soil conservation programs which have been supported by the government, cabinet, and indeed the parliament of tenure are a move in the right direction. I think what the president of Burkina Faso, which is in the Sahel, a very tiny country. The president is trying to deal personally and directly with his own people—this is in the right direction.

But these examples, I think, are very, very few and far between. There needs now to be a really radical change, I think, in the personal attitude of African leaders if we are to really help Africa get on the right track.

Chairman LELAND. Let me ask you, how much of the agricultural research done in or for African countries is focused on improving indigenous crops that are already adapted to the periodic droughts which strike the region?

Mr. WALKER. Well, this is one of the major criticisms that one would have of the millions of dollars of aid poured into agricultural research in Africa. That is a broad statement that has made virtually no contribution to the plight of the people in that country. Now, there are exceptions. Your own U.S. AID helped to develop a short-stemmed drought resistant sorghum very recently within a period of 2 years, which has been one of the major stabilizing factors in the present drought in the Sudan, for example. But these examples are few and far between, and most agricultural research, is not culture specific to the needs of that continent.

I make the plea that first of all research stations should know what it is that people within a 200- or 300-mile radius of their own research station need in terms of food, and then they should bend their efforts to producing the genetic answers to those requirements. How do you bend plants to the environment? We cannot bend the environment to the plants. It is too big, and it is gone past

that point of no return. We can bend the plants to the environment, and there needs to be that thrust down the road of looking at cassavas, yams, white maze, and sorghum, and those crops which are indigenous to Africa. Seeing how they can be made appropriate to the environment, and then to the needs of the people.

Chairman LELAND. Are there certain crops that should not be grown in areas where drought is likely?

Mr. WALKER. Well, of course, those that are not drought resistant should not be grown there and those which are not appropriate to the food tastes and the food needs of people.

Perhaps I could give you a couple of illustrations, Mr. Chairman, to illustrate the complexity of this. In the current year you may remember some months ago, the FAO put out a statement which was picked up by all the press and media of the world that essentially the rains had come and the drought was over and the back of the present famine, as it were, had been broken. This was based upon satellite technology which had photographed green crops growing in different parts of Africa.

Now, let me illustrate two problems out of that to indicate that the camera can tell a lie, and that the picture is not as simple as that. In the western province of Sudan where American food aid from your own Public Law 480 program had been distributed and had saved hundreds of thousands of people's lives, essentially sorghum, the people felt with the first rains that they had to take advantage of that and plant their seeds. They had no seeds, so they turned to your sorghum food aid, and they planted bits of that food aid as seed, and it grew.

What those farmers didn't know and what the satellite did not know was that inevitably your food aid was an F-1 first family hybrid grown in this country, and it is characteristic of F-1 hybrid that they will not produce a harvest. It will grow, but produce virtually no crop. So, while the satellites were photographing green grass as it were, green crops growing, it would not produce food. Now on the other side of the Sudan and on the eastern side, millet was the primary crop, and those same satellite photography photographed green millet growing.

However, millet grows through three cycles. There is the first rain at planting. There is a rain during the middle of the harvest, and then there is a third rain toward the end of the harvest. The critical importance of the third rain is that that washes out of the head of the millet just before cropping, the millet head worm, a pest which lives off the crop. Now, this year that third rain did not come, so the satellite, again, photographed millet growing, and yet the pest was through the crop and it produced no harvest, so you have a very difficult and complex task of actually forewarning early warning systems and anticipating what is going to happen.

One of the pleas that my own institute has been making and some of the research we have supported is not looking toward satellite photography and the refined side of science and technology, but looking at the social indicators on the ground, because, of course, the one person who knows what is happening to a crop is the farmer. He knows where it is growing or not, and they reflect that knowledge in their social patterns of behavior. They have about 6, 8 or 10 thresholds through which they go which can

spread over 10, even 12 years of no rain before they will move house and begin to move and become what we call environmental refugees and which eventually becomes known as a famine.

Now, if you can spot those thresholds—the selling of personal possessions, the selling of farm instruments; ultimately, the selling of jewelry and even their weapons, the selling of labor. All of this happens before people begin to move. If you can spot those social indicators and make a response at that juncture with very modest inputs of aid in terms of hoes and seeds essentially, then you can, as it were, avoid the calamity that emerges as large groups of people come to the end of these series of thresholds and begin to move en masse.

Six million people in Ethiopia alone are under risk at this present time. If you go back over 2,000 years of tribal records in Africa, very rarely did more than 400, 500, or 600 people die from a so-called famine because they had learned what I am pleading with you this morning to strike the balance between their own needs and the caring systems of nature. There is just an absence of that balance which is the problem.

Chairman LELAND. You say historically that only 500 or 600 people would die in a famine.

Mr. WALKER. Those are the kinds of figures.

Chairman LELAND. In the same regions where the recent famine struck?

Mr. WALKER. Yes, notwithstanding population explosion in Africa, which obviously is a factor. Notwithstanding that factor. There is no correlation between the pastoral balance evolved over 3,000 years of tribal history in Africa and people living in balance with their natural environment. We read of areas of land being left for 15 years fallow, not 1 or 2, but 15 years. People knew how to move around their territory and leave land fallow because they knew that only balance would insure their security.

With the impact of colonialism, the growth of independence and the kind of high energy, high-technology agriculture which we have imposed through our aid programs on the African people, that balance has now been lost, I suspect irretrievably.

Chairman LELAND. Irretrievably?

Mr. WALKER. I suspect so, yes.

Chairman LELAND. In your role as chairman of the Grants Committee for Bob Geldof's BandAid Trust, what elements did you stress in making funding decisions?

Mr. WALKER. Well, we were trying to—the reason I took this job, which is quite an onerous job, I am responsible, in fact, for overseeing the spending of both the BandAid and the American LiveAid end, the total budget of that operation, was that I wanted to try and put into practice, the kind of thing I have advocated in my statement to you.

Crucially, this great upsurge of new public money and generosity, which, of course, contradicts the bureaucrat's view of what is called compassion fatigue. That is a bureaucratic idea. That is not how people feel or how people act.

Chairman LELAND. Except that Bob Geldof himself has said that he has fatigue.

Mr. WALKER. Well, he is tired, and I think we are all tired trying to handle this sort of monument. That is another matter.

I wanted to prove that this could be spent to secure quality in programs and that the actual amount of cash you spend was not of the highest order of priority. What you will be interested to know is that in the applications put to us, we had well over 600 programs from North America, essentially, and Europe, and of those the quality was extraordinarily low, very very poor indeed, and by April of this year we had disposed of 40 percent of the applications yet spent, only 20 percent of our income.

Now, as of Tuesday of this week, we have now covered something like 500 of those 600 plus applications, and still the quality is well below par, and the critical thing is we will not spend the money unless we are satisfied that we will produce results on the ground. What we look for, though, is the kind of criteria that I put to you this morning—the involvement of people, the commitment of their own communities, the capacity to work in balance with their own environment, to use as many of the natural resources which are on hand rather than to bring them from outside, to enhance the role of women who, as your member said, are the farmers of Africa, and a range of criteria such as we are discussing this morning.

Chairman LELAND. Thank you, Mr. Walker. Let me turn now to the gentleman from New York, Mr. Gilman, for questions.

Mr. GILMAN. Thank you, Mr. Chairman.

Mr. Walker, we certainly welcome your analysis of some of the problems that you presented to our committee. I recited some legislation that I am proposing, H.R. 2782, along with my colleagues, that focuses on the small-scale resource-conserving local projects. Would you care to comment on your view with regard to that kind of a proposal, whether you think it would be effective.

Mr. WALKER. Well, I would, sir, and I think that one of the most outstanding contributions of this work was by your own American Office of Technology Assessment. I think it was called Africa Tomorrow, which was published, if I remember rightly, last November or the fall of last year. This particular argument of the importance of small-scale microtechnology is advocated there, I think, with persuasion and substantial skill, and I think that is the appropriate road down which to go.

Now, of course, one must register the caveat that all governments will and do need micro input. The whole of the Sahel, as you know, has no roads. Ethiopia has no really effective port. Sudan has no port. People and governments are going to require universities and macro input at the macroeconomic level. But that is not really going to effectively improve food production. That will only be done now in Africa at the base of the human pyramid on the ground where people live in their own communities, and there is a whole range of technology available now, some of which I mentioned in my paper like intercropping, alley cropping, water harvesting in small microcatchment areas, which are very well researched and which are available.

You may be interested to know that my own institute IIED has engaged in some 18 months of research now which will be published at the end of this calendar year into what are the successful stories of development in Africa. We know all about the gloom and

doom and the disasters and the catastrophes. But Africa is also full at this village level of highly successful, impressively successful, 40, 50, 60, 100, 150 percent improvement in output of food for food production, and we have asked the question where are those programs? What are their essential characteristics? Are they culture specific? If not, can they be replicated to other communities?

We will be publishing, and it is a very impressive story toward the end of this year.

Mr. GILMAN. I think that would be quite helpful to all of us to have that kind of bibliography available.

Mr. WALKER. I think so.

Mr. GILMAN. Having spent so much time in the PVO sector, what impact do the PVO's and NGO's have in promoting conservation and natural resource schemes in the developing countries? Do they have a substantial or significant impact on policies in those countries?

Mr. WALKER. Well, I believe they do. My own institute would like to take credit, and I believe we may without being arrogant, for levering into position in February of last year the world's first international tropical timber agreement. We were able to do that in the way that governments can't do it. This is the strength of the PVO. We were independent. We were small scale. So we invited all the partners who had failed over so many years to strike agreement—legal agreement, trade agreement for the tropical forests to a private meeting in London, out of which within a matter of weeks, the appropriate number of signatures was secured, and I think there are now, 12 months later, 36 or 38 signatories to the tropical timber agreement.

The next stage is to resolve the dilemma over who will be the director of that operation and where it will be physically located. In other words, we are back into a bureaucratic problem and tangle which only governments can resolve.

Second, I think that PVO's, because of their independence, and they are naturally idiosyncratic. I think that is their great strength. They are not bound by some of the constraints which properly governments are bound by and can help to lever up people power, community development of the grass roots of the society. They can act in terms of solidarity with people. They can introduce new ideas. They can stimulate old ideas.

One of the areas of research particularly in Asia, but applies also to Africa, is how do you take the best out of the past, the traditional wisdom, the inherited knowledge, usually handed down in Africa from mother to daughter. How do you take the best of that and blend it with the best of our culture, the science, the technology and the wealth that we can put in. NGO's are very well-equipped, I think, to know what the strength is of that inherited knowledge, traditional knowledge at the grass root level.

Then, I think, too, they can to a degree take risks at that level which are very often difficult for the larger agencies to take. They can try new ideas out and try things on a small scale level and not do too much damage if it doesn't work. All in all I think as a partner in the operation, PVO's are absolutely essential, and I think in Africa, particularly now, so far has degradation gone that working

from this small scale, bottom up, people-orientated approach really is the only one which is going to produce the results.

Mr. GILMAN. I think we are all pretty much aware of what the underlying problems are and how to protect the natural resource base. How do we best approach this in the international community, when trying to turn around the thinking of some of the governments that have been pretty lax in addressing these problems?

Mr. WALKER. Could you rephrase your question?

Mr. GILMAN. How can we best encourage the developing nations that haven't attacked the problem of protecting the natural resource base and development? How do we encourage them to move in another direction beside the PVO effort and besides some of these piecemeal efforts? Is there any other mechanism, any other leverage that we can or should utilize to try to redirect that approach?

Mr. WALKER. Well, I think World Resources, 1986 publication to which I referred earlier in my testimony is one attempt. I say in my written statement to you that perhaps the most important feature of this report, and it has gone to every decisionmaker in the Third World and throughout governments and both multilateral and bilateral aid agencies, are the gaps.

These are represented by a cross in the data tables, and there more crosses than figures in many, many cases, and we believe that only when governments realize that they are being shown to the rest of the world, they don't know what their population or their food or their water or their tree cover actually is, that we would get any movement there. So that is one small contribution.

I do refer in my paper, too, and this is an enormous subject, that increasingly—and this was the thrust at the conference last week in Finland, to which I referred. Until we are prepared to really look holistically at an interdisciplinary way at these problems, we will make no real progress.

I think it was my own predecessor in office, Barbara Ward, who said the great discovery of the 20th century was not really the splitting of the atom. It was the awareness of the interconnectiveness of all things. All things hang together, and until that knowledge is reflected in our educational systems and in the way governments, in this instance, distribute funds and organize aid programs, we will make no real progress down the track we want to go. So this awareness of the interdisciplinary nature of the problems we are tackling has somehow got to be communicated through to governments North and South.

I would say, if I may, Mr. Chairman, that I think in many ways while the thrust of your questions is quite understandable, the real problems lie in the North, and not in the South. It is we who have to change our ways if we are to make real progress. There is a greater need for us to change to understand our pivotal position, than it is for small governments in the South. If you gather all aid flows together, out of every dollar spent, 80 percent of that is produced by the poor, and the poor governments of the South.

The North contributes about 20 percent. I said in my statement that we have all taken more out of Africa in the last 12 months with all the increased public expenditure—Bob Geldof, LiveAid, BandAid, U.S.A. for Africa—we have taken more out of Africa

than we have put in. My own government has a 30-percent balance in favor of my own government with Sudan this year.

Mr. GILMAN. In what ways are you suggesting that we change?

Mr. WALKER. Well, I think there has to be an enormous program of public education, because if my first point is correct, that all things are interconnected, sooner or later the things we are grappling with out there are going to hit us as they are hitting you. My television this morning told me of your drought in southeast America at this moment with your farms. I believe you had 30,000 farmers went bankrupt last year.

European agriculture is in a state of total disarray. It is just wrongly skewed, and sooner or later those problems that we are seeing in Africa and Latin America and Asia will catch up with Americans and British sure as the night follows the day.

Mr. GILMAN. What are you suggesting are some of the more important changes that we should be adopting?

Mr. WALKER. Well, we have to go put much more into the soft technologies. We have to learn how to recycle, particularly in the field of energy. We have to look through our educational programs for this idea of the interdisciplinary nature. I happened to be on holiday, Mr. Chairman, when the dreadful Chernobyl disaster occurred, and so I was able to listen to the radio more than I usually am able to when I am working.

If you think of what we had to go through at this end listening to the explanations as to what the problem was—we started off with those who knew about nuclear reactors. They were followed by those who managed nuclear reactors. They explained the management of them. Then we had the physicists explaining the physics of nuclear fission. Then we had the people who talked about what a melt down is. Then we had concrete specialists who spoke of how they might encapsulate it, and then hydrologist about how if they failed, it would get out into the water supply, and then the climatologist, how and why the cloud was swirling and moving around the world the way it was, and then the medical people who told us what would happen as that began to fall, and then the agriculturalist and the people who knew about cattle and grass and sheep and how it would get into our eating systems, and then the social scientists, what would happen if society begins to break down if this gets to the point, as it were, beyond control.

I counted 16 different disciplines from my own radio program, all of which were necessary to have any concept of what was actually happening. Now, that illustration applies right across the board. We are one world and all these things are interconnected, and somehow that has to be reflected, I think, in changing our whole educational thrust.

Mr. GILMAN. Thank you. Thank you, Mr. Chairman.

Chairman LELAND. The gentleman from North Dakota, Mr. Dorgan.

Mr. DORGAN. Mr. Chairman, I was at another hearing and was unable to be here for Mr. Walker's entire testimony. I have had a chance to scan through some of it. I won't ask questions, but I did want to thank you for your appearance. I think, at least, the pages I have been able to read through are excellent and some of the best

testimony that I have seen in this committee. Thank you very much.

Chairman LELAND. Mr. Walker, let me just ask you one final question, if I may, and that has to do with Israel and what it has been able to accomplish with its agriculture.

Mr. WALKER. Yes.

Chairman LELAND. To what extent can the agricultural techniques and technology employed in Israel be transferred and utilized in sub-Saharan Africa?

Mr. WALKER. Well, it was in my mind, and I forgot to make the point that you are now asking, Mr. Chairman, an answer to an early question on small-scale work. I think the small-scale techniques developed by the Israelis and elsewhere in their own desert areas are wholly appropriate and prove that it can be done. It proves that the technology is there and the skills are there through a different series of microcatchment techniques for redeeming land which has been lost, and if the politically will is put behind that, then of course, you can change the desert into productive land, and that is the task certainly in Africa. We must redeem large areas of land which have been lost to the desert. It can be done.

Chairman LELAND. Thank you so much for your excellent testimony, Mr. Walker. We really appreciate your participation in the hearing today. We know what kind of duress you had to endure to get here, and we want to thank you very much. You are a most articulate and compelling witness for these critical issues.

Our next witness is Tom Stoel. Mr. Stoel is Director of the International Program at the Natural Resources Defense Council, and additionally, president of the Global Tomorrow Coalition. Today, in addition to the NRDC, Mr. Stoel is representing the National Wildlife Federation, the Sierra Club, the Audubon Society, and the Environmental Policy Institute.

What do you do in your spare time, Mr. Stoel?

The committee asked Mr. Stoel to join us today because he is recognized as an authority on the desertification and the deforestation problems of the sub-Sahara. He has worked closely with several Members of Congress who have taken a lead on environmental issues. He will help us identify what is being done and what needs to be done to arrest this massive destruction of the land across the continent. Mr. Stoel.

STATEMENT OF THOMAS B. STOEL, JR., DIRECTOR, INTERNATIONAL PROGRAMS, NATURAL RESOURCES DEFENSE COUNCIL

Mr. STOEL. Thank you, Mr. Chairman. I appreciate very much the opportunity to testify this morning. You are to be commended for holding this important hearing. You identified correctly the groups which I am representing today. I would mention that together we have a total of more than 5 million members in this country.

These groups are concerned about the environment, not only in the United States but all around the world. We recognize that in poor countries, the quality of the environment, as well as the welfare of the people depends on meeting basic human needs. Therefore, we are deeply concerned about the growing crisis in Africa.

As Mr. Walker did, we wish to emphasis that Africa's crisis is a long-term one, not just caused by a drought and not to be solved by food aid alone. We must remember, for example, that in the early 1970's Africa went through a famine which was equally devastating. The newspaper headlines of 1973–74 are eerily similar to those of last year. We must act now to ensure that those headlines do not reappear in the 1990's.

In particular, the problem of hunger in Africa is due in large part to degradation of the natural resource base under the pressure of rapidly growing populations. As Mr. Walker has stated, and as stated in more detail in my written comments, Africa's forest and soils—on which most of her people depend for food, dependable water supplies and other necessities—are rapidly disappearing. It is evident that population growth which causes populations to double in less than a generation—the situation in many African nations—simply cannot be sustained.

These conditions must be reversed if Africa is to enjoy a decent future. We recognize fully that the solutions to these problems must be designed and administered by Africans, but help from abroad can play a very important part. The United States, the world's richest country and the leader politically of the western industrialized nations, must provide leadership. We don't see that kind of leadership coming from this administration, and we believe the Congress should take several steps to ensure that we provide it.

First, as suggested by Representative Gilman, the U.S. Agency for International Development should be directed to support a multitude of small-scale, local efforts to increase food production in ways which protect and restore the natural resource base. These efforts must involve local people, and especially women, at all stages of project design and management. Usually these projects should be designed and administered by local governmental or nongovernmental organizations, or through private and voluntary organizations. A constant theme among aid agency personnel and others who have spent time on the ground in Africa, is that it is projects of this kind which are most likely to succeed.

We must build on this field experience and make these projects not isolated examples, but the norm. USAID has been doing some of these things, but not nearly enough. It is our view that in a time of tight budgets, the Congress should provide more and not less direction as to the priorities AID should follow. The Congress can do so by enacting H.R. 2782, the bill described by Congressman Gilman, and by enacting legislation similar to H.R. 4908, a bill on training in Africa introduced by Representative Schneider.

Second, we believe the Congress should direct USAID to step up its family planning assistance in Africa, with the goal of establishing a major population program in each African nation where there is a bilateral U.S. aid program. Third, the Congress should ensure that the United States increases its pressures on the World Bank and the African Development Bank to stop funding the large-scale, centralized projects which have failed and to adopt the approach we have suggested for USAID.

Fourth, the Congress should direct that the United States take steps to relieve poor African nations of their crippling burden of debt. I noted just yesterday an article from the Economist maga-

zine which states that on a worldwide basis, and I quote, "The total net flow to developing countries from industrialized countries fell from $139 billion in 1981 to $80 billion last year."

Mr. Walker has noted that European countries and the United States are actually withdrawing funds on a net basis from Africa. How in the world can we do that and expect the Africans to pay off debts? The consequence is that the new aid is largely going into rolling over these old debts, rather than the kind of investments that we all agree are needed. Even though most of this debt is owed to our government and not to our private banks, we are lagging far behind in providing debt relief.

A little over a month ago, Canada announced a 15-year moratorium on debt owed by the poorest African countries. We have no such policies in sight. We believe the Congress should tell the administration that they are necessary. Finally, we believe the Congress should require the administration to develop a plan for responding to this long-term crisis. It is shocking that such a plan does not exist by now, for without it our country cannot identify priorities, make long-term commitments which are necessary, and coordinate with African institutions and other donors.

These actions are feasible. They would make a difference, but it would be naive to pretend that they will be easy. This very afternoon, the Appropriation Subcommittee on Foreign Operations will mark up a bill which is widely predicted to provide less money for development assistance to Africa.

The groups which I represent are convinced that we cannot abandon a continent which contains 20 percent of the Earth's land area, and soon we will have an equal share of the world's people. But we are also convinced that to sustain the long-term commitment which is required, the U.S. public must be convinced that every foreign assistance dollar is well-spent and is making a difference. That is why the policy changes we recommend are so urgently needed.

If these changes are made, the United States can help Africans overcome their crisis and feed themselves. The alternatives, continued human suffering and environmental degradation, cannot be allowed to happen. Thank you, Mr. Chairman.

RESPONSES TO QUESTIONS FOR THOMAS B. STOEL, JR.

QUESTIONS SUBMITTED BY HON. MARGE ROUKEMA

Question. In your written statement you recommend that the U.S. Government decline to provide increased funding to the MDB's for on-the-ground rural development, until the MDB's stop supporting environmentally damaging projects. Are projects of this kind so counterproductive that we should stop funding them altogether?

What sort of reform within the MDB's, or policy statements, should the United States seek in this regard?

Answer. We believe that environmentally damaging MDB-supported projects are so counterproductive as to warrant a freeze in the level of funding from the United States to the MDB's for on-the-ground rural development. Among the recent bad examples are the Bura irrigation project, which has poured excessive numbers of settlers into an arid environment in Kenya, and Botswana livestock project III, which promises to exacerbate the desertification of already overgrazed rangelands. Both these projects were supported by the World Bank. Many others could be cited.

We recommend that the U.S. funding freeze last only until the MDB's adopt modest reforms which are clearly needed and long overdue. In the case of the World Bank, these should include:

1. A requirement that an environmental assessment be prepared and considered, as early as possible in the planning cycle, before the Bank takes any action which would have a significant effect on the environment, including an examination of alternatives.

2. A requirement that each Bank country planning paper discuss the environmental consequences and sustainability of the actions proposed, and any measures which should be taken to prevent or mitigate adverse effects.

3. Expenditure of an increasing proportion of Bank resources on small-scale, participatory projects in sustainable agriculture, especially on marginal lands; forestry; soil conservation; and preservation of key natural areas.

4. Requirements that Bank officers consult with local nongovernmental organizations in identification and design of environmentally sensitive projects and in Bank-supported country planning, and when possible contract with such organizations to provide their advice and services in the preparation of projects.

5. Mandatory involvement of environmental and health ministers, or comparable officials, in Bank-supported project design and country planning.

6. Systematic review of types of projects especially likely to have adverse environmental impacts, such as those involving support of livestock in low-rainfall areas or clearing of wetlands or tropical moist forests, and issuance of policy guidelines which eliminate or mitigate those impacts.

7. Establishment of additional environmental staff positions, including at least one in each of the Bank's regional offices; and addition to the Bank's Economic Development Institute a component to provide training in environmental and natural resource planning and program development.

8. A requirement that key project documents—such as appraisal reports and environmental assessments—be available to the public.

Question. You also mention the need to forgive part of the debt held by African governments and a reorientation of U.S. and MDB project lending to Africa. You also suggest, in your prepared testimony, that the U.S. should influence and assist African governments to reform policies which have proven counterproductive to agricultural development. I assume one of the tools we could use to encourage such reform would be increased policy-based, or structural adjustment lending. How much should the U.S. and/or MDB's rely on structural adjustment lending and how much should we rely on project lending—which has traditionally stressed meeting basic human needs—to achieve the results we seek?

What mix of such lending do you think would be most effective?

Should bilateral or multilateral lenders take the lead in this regard?

Answer. It is true that structural adjustment lending can facilitate the adoption of needed economic policy reforms. However, this kind of lending is by definition temporary, and it should not dominate the long-term country programs of U.S. AID or the MDB's. Nor should it become a long-term substitute for more fundamental reform, such as debt relief, as seems to be the tendency in Africa.

We believe the basic purpose of foreign aid should be to help people help themselves. This can best be achieved through carefully targetted project assistance, which can be modified as people's needs change and can be carefully designed to enable people to meet their own needs in the shortest possible time. When counterproductive economic policies defeat the aims of project assistance—as when low agricultural prices make it pointless to increase production—the United States should make policy reform a condition of its assistance.

As indicated in my statement and in the previous answer, the tendency of the MDB's to support large-scale, environmentally damaging projects dictates that any increase in funding from the United States for on-the-ground assistance should be channelled through U.S. AID's development assistance program—not through ESF—until the MDB's adopt needed reforms. AID's own mandate should be sharpened by enacting H.R. 2782, to ensure that AID supports projects which can become models for the MDB's and for African governments.

QUESTION SUBMITTED BY HON. BENJAMIN A. GILMAN

Question. What additional contribution can the Peace Corps make to solving environment and resource problems in Africa?

Answer. Peace Corps volunteers are an excellent way of facilitating the kind of small-scale, decentralized development which is needed in Africa. The approaches outlined by Director Ruppe before your committee seem sound. The Peace Corps

should receive increased funding for its work in Africa. Enactment of H.R. 2782, which would channel resources in part through Peace Corps volunteers, would help to accomplish this.

[The prepared statement of Mr. Stoel appears at the conclusion of the hearing, see p. 65.]

Chairman LELAND. Thank you, Mr. Stoel. Mr. Stoel, how much loss of food production is due to environmentally destructive practices in drought afflicted areas of Africa?

Mr. STOEL. Mr. Chairman, as Mr. Walker has stated, that is impossible to tell. On a continental basis in Africa, all we have is anecdotal evidence, and obviously there are multiple causes. What we do know is that environmental degradation is widespread and increasing. As Mr. Walker stated, some of it is probably already irreversible. We know considerable amounts of food production are lost, and each time we have one of these recurrent droughts, we have a human disaster because we have reached the limits of the natural resource base. That much we know, but exact quantification is lacking. We believe the United States has a responsibility to use our satellite capabilities and other tools to help the Africans and the rest of the world identify these figures that you are seeking.

Chairman LELAND. There seems to be institutional factors which favor funding large-scale traditional development projects over small-scale, low-technology ones, as you have indicated. If that bias is there, what can we do to change it? What would you suggest that Congress can do?

Mr. STOEL. Mr. Chairman, I would suggest, as I stated before, that the Congress should give clear directions to the relevant aid agencies. Mr. Love from AID, in the written statement he submitted, pleads with the Congress not to give AID direction in order to provide what he calls balance to their program. We believe this balance is really a lack of focus that makes the total effort fragmented and ineffective. This is combined with the fact that we have no long-range plan to guide us.

We believe that the kind of legislation that I have recommended would give AID clear direction that these are the kind of projects they should not only fund, as they have done sometimes in the past, but fund as a matter of priority in every country in large numbers, and with careful evaluation so they can serve as models for the countries themselves and for other aid agencies.

In the case of the multilateral banks, the World Bank and the African Bank, the situation is even worse. They seem to be wedded to large-scale projects. As the largest donor to the World Bank and a significant donor to the African Development Bank, the United States, both by redirecting its own aid program in these directions and by pressure through our executive directors, should cause them to change their priorities.

The donors have to exert this kind of pressure because the agencies tend to go in the other direction unless we are right on top of them all the time.

Chairman LELAND. Thank you very much. We will return to these points in a moment. Let me now introduce the chairman of the Subcommittee on Africa of the Foreign Affairs Committee who

has joined us. We welcome him and would invite him to ask any questions that he might have. Mr. Wolpe.

Mr. WOLPE. Thank you very much, Mr. Chairman, and let me also commend you for holding these hearings on the subject, and I really do appreciate very much the invitation to join with you today, albeit for a few minutes.

Your hearings coincide with a series of hearings that we are about to undertake in our own subcommittee trying to lay the basis for new directions of policy in the next term of Congress when we will introduce omnibus legislation. We are struggling with these issues, as well.

One of the things that I am trying to understand more clearly is why it has been so difficult, from an institutional standpoint, to get the kind of focus. You talked about the absence of focus—I agree. You have identified some of the broader institutional problems underlying the current African famine, for example. Why has it been so difficult institutionally to get the focus you are describing? We need to understand what is happening within the bureaucracy, as you examine these issues.

Mr. STOEL. I welcome that question. I heard a talk last year by a very high official of the World Bank, in which he stated and admitted that the World Bank had failed in Africa. He said the World Bank had advocated and supported large-scale industrialization of Africa in the 1960's and early 1970's, and that was clearly a failure. He thought that now the World Bank had identified the solution, which was large-scale mechanized agriculture.

Now a number of us think that that is still way off the track. I think the basic reason is that people, quite naturally have viewed Africa as if it were the United States, and we have tried to pull Africa into the late 20th century in one grand leap without realizing that the African culture, the African physical environment, the rural-urban patterns in Africa are all very different from those in our own country.

I think in the case of AID, which is changing a little quicker, we now know what works, but it is going to take some strong direction to push those institutions in less than 10 or 20 years—and if it takes that long, it is going to be disastrous—into the paths that they need to follow. I think persons such as yourself have that opportunity now in the wake of this tragic famine.

Mr. WOLPE. The other part of our concern here, of course, is not only trying to develop appropriate policy initiatives, by developing popular support that would sustain those initiatives over time.

What advice would you give those of us in the Congress, and what has been your experience working at this from outside of this institution? How can we develop the kind of popular support that is necessary to sustain this kind of new initiative that you are describing?

Mr. STOEL. Mr. Walker may want to comment on this, too, but I think we all need to pursue the kind of approach his institution is pursuing: To publicize some of the success stories in Africa. I have often told my friends in AID that they are their own worse enemies in terms of never telling the Congress and the public in understandable, human terms what they have accomplished, and this

is largely true of the development banks also. They are very remote, unknown institutions.

There are these approaches that can work. There are success stories. Those are the kinds of things—because they involve individual human beings and rescuing them from suffering—that the American public can understand. I think abstract statistics simply don't turn the public on. Obviously those pictures of starving people last year did, but I think the success stories—before-and-after accounts and so on—can do the same thing. And I think that the environmental community in the United States is now ready to join with you in publicizing that kind of thing, so we can get our members to be constituents for foreign aid which sometimes in the past they have not been.

Mr. WOLPE. I think that point is very well taken. One of the tragedies of the aftermath of the African famine is that I still find, I think, that most Americans are unappreciative of how much impact the American assistance and the international relief effort really has had on the African continent. All of the stories about food and moneys being diverted, that were really a very small piece of the totality of what was happening, and the impact in Africa has been absolutely incredible in terms of people weren't dying by the thousands as a result of the relief effort. So I think that point is well taken.

The other question that I would have is, I am not persuaded that we can sustain this kind of effort over any length of time unless Americans begin to more clearly recognize our self-interest in what is happening in developing areas, Africa and elsewhere, and I wonder if you would have any thoughts about ways of making that self-interest connection more clear to Americans?

Mr. STOEL. I would really ask that Mr. Walker comment on that in a second. This is difficult because this is perhaps single poorest area in the world. But there is no question that we do have, in addition to humanitarian interests, national security interests and economic interests, both present and potential there, which are not fully understood.

We would strongly share Mr. Walker's viewpoint, as he expressed earlier, that the environmental trends in the world are going to catch up with the United States. There are major international environmental problems that are going to require cooperation from people on all the continents, and if we allow one continent to drift into despair and perpetual crisis, we are going to suffer the consequences. I think those stories have to be told over and over again, and that is about all I can say.

Would you like to hear from Mr. Walker? I think he has been very good on this issue.

Mr. WOLPE. Mr. Walker.

Mr. WALKER. Well, I am possibly less able to answer in terms of the American economy than my own or the European economy, but I was looking in the publication Authentic Development in Africa that I did for the American Foreign Policy Association, the headline series, where I do express this question of self-interest in terms of America. I think I take the example, for instance, of the way in which a very powerful piece of your own industrialization; that is, the tomato industry which has such a tremendous impact

on the health of your people, as well as providing livelihood and work for people. The capacity of the tomato plant to yield to harvesting, to crop gathering on the large scale, and to whether the tomato could be plucked off the plant, all depended upon one little mechanism.

Now, the gene to produce the one critical mechanism which gave rise to the entire American tomato industry was, if I remember rightly, in this case, in Latin America and South America. You imported that piece of genetic tomato plant into your country and from that developed the entire tomato bottling, canning, drinking, health program that comes out of that factor. Now, you are importing genetic material from the South all the time in all kinds of areas. Now that's one small area in which the strength and health and self-interest of your own community and the United States of America depends upon the Third World.

You can multiply that self-interest plus a whole range of positive heads of that nature. Seventy percent of the manufacturing industry in my own country in the United Kingdom depends upon Third World interests, 70 percent, and those factors are replicated across a widespan of the developed world.

The negative side of that equation is that over 30 nations now have a nuclear capacity in theory, at least, and you can go down that nuclear side of the equation, the negative, where we have a self-interest in not allowing weapons of mass destruction, et cetera, and all the problems that accrue from this to be in the hands of unstable political minorities. The third area, I think, is that there are just no markets in the world which are not saturated except in the South.

There is no way in which we can continue to pump into our own markets which are oversaturated with consumer products. All that is left for exploitation in this positive sense is in the South. So there is a range of self-interest arguments that I think can very easily be developed.

Mr. WOLPE. Thank you very much.

Chairman LELAND. Thank you. The gentleman from California, Mr. Panetta, may have some questions.

Mr. PANETTA. Let me explore, if I could, the issue of USAID right now and what is happening with it. You talked about in your testimony the need to better focus that aid. What's happening with it now? I mean what is the problem with it now in terms of how it is being distributed?

Mr. STOEL. I think the basic problem is that it is simply administered on a rather ad hoc, country-by-country basis with no consistent doctrine behind it, so you look at the Africa program, and it is one thing in one country, one thing in another country.

I think there are three problems with this. First, I don't think it addresses the problem of maximizing effectiveness in increasing food production and achieving other goals on a limited budget. Second, it doesn't give the public a clear image of what USAID is accomplishing. Third, it is fragmentary and doesn't provide a base of knowledge across a number of countries about what works. After all USAID, although it is a large bilateral aid agency, must in the end create models for replication, both by African countries across the continent and by other AID agencies. Unless we have a critical

mass of projects that follow a certain approach, which is the philosophy of Representative Gilman's bill, we are not going to have that. We will have dissipated our efforts to where, in 5 years, it will hardly be noticed that they happened.

Mr. PANETTA. What kind of projects are they funding now, and what do you see? In your estimation, are they moving toward the kind of projects that make sense in this area at the present time, or is it still very diverted?

Mr. STOEL. We believe that there is little direction, and I cannot see a trend. There are some good things going on. There is clearly an emphasis on encouraging policy reforms, and we agree with that. But beyond that, if you look at Mr. Love's statement, he cites a miscellany of things that they are doing.

He doesn't say what they will be doing in the future. These are backward looking statistics, and I don't see a strong focus developing. Over the last 10 years, AID's Program has become more positive from the environmental point of view in Africa, but I think that progress largely peaked 3 or 4 years ago and hasn't continued. The kind of learning we have got from the OTA report and other sources not been incorporated in AID's current program.

Mr. PANETTA. If you had charge of that program, what would be the direction you would provide?

Mr. STOEL. I would provide the kind of direction in H.R. 2782; that is, a very substantial emphasis on projects that are small-scale and run largely by nongovernmental or local entities. I think this is crucial. Highly paid Americans living in the capitals of Africa may be very dedicated people, but they simply can't administer these kinds of projects. We think the cheapest way to get large numbers of projects delivered in the villages of Africa is to utilize these intermediaries which are available, and which in anecdotal evidence from AID personnel themselves, do the best job.

Mr. PANETTA. In your experience—I assume it must vary a great deal with regard to Africa, but what is the best example of government in an African nation that is cooperative in this effort that is really trying to work to resolve this problem, and what is the worse example?

Mr. STOEL. There are a number of good examples. I think the Governments of Senegal, and as Mr. Walker said, Burkina Faso are good. But as we all know, there are some governments in Africa that have a very long, long way to go. Unfortunately, one of them is our more-or-less client state, Zaire, and there are others that have not been responsive as yet.

Mr. WALKER. May I make a comment, Mr. Chairman?

Before you came in, Congressman, I did mention an analysis which we are going to publish at the end of this year called The Greening of Africa, by Paul Harrison which has researched what are success stories, et cetera. I have some notes here from the text, and I see, for example, that your own NGO/PVO care is pioneering doing stabilization work in Niger, a very, very successful program, extremely impressive and one that can be replicated. It is not culture specific. It can be replicated.

I think I have mentioned already this morning the work that, for example, that the American Foreign Service Council has done in the very difficult area, the urban situation as against the rural in

helping women to develop kitchen gardens and small gardens and how to produce food in cities. They have done that kind of work in Guinea-Bissau. That can be replicated. My old agency, OXFAM, pioneered in the Yatenga district of Burkina Faso this whole area of water harvesting. How do you catch water, trap it on a small area and replicate it, build this up through village communities into hundreds of kilometers of land. That, now, is extremely successful. It is now a showpiece for the government of Burkina Faso to take aid experts to see.

I think all these are scattered across Africa. The support which USAID has given to the government of Zimbabwe in this extraordinarily important area of population planning and family planning and produce what perhaps is the only really successful population control program in the whole of Africa has come out of USAID backed funds.

There is no government in Africa which is doing a first class job in the way that you say, not a single one. There are examples of new shifts, as I said in answer to an earlier question, in one or two countries, which Burkina Faso is one. I think the Soil Conservation Program to which many American PVO's have contributed in Kenya and the way in which the system of education is now being used to communicate the practical skills and training necessary to conserve soil is very impressive.

My information is, unfortunately, that Kenya is going to go into a very difficult political period during this calendar year, and whether the government of that country will survive remains to be seen, but these ideas are being lodged now at the grassroots of Kenyan society, and ultimately are bound to bear fruit in the years to come.

Mr. PANETTA. The last question, if I might—I don't like to set goals, and yet goals are almost essential sometimes to force action, because when you allow aid to flow in a kind of an ad hoc basis without goals as to where you want to wind up, you lose the impetus. You lose the push, and I was wondering if perhaps by the year 2000 there are some goals we could establish in terms of the AID programs that are there. Is there a way to try in some way to quantify the goals that we want to attain for the continent during that period of time so that we know whether we are getting anywhere?

Mr. STOEL. I think it would be worth exploring that and moving in that direction. It is interesting that the World Bank, which in many ways is a logical coordinating agency, has produced a whole series of reports on goals for sub-Saharan Africa, and frankly they seem to have a more desperate tone and a more uncertain tone as time goes on. One thing, for example—and I do want to emphasize this—is that there is a tremendous investment gap in Africa amounting to billions of dollars. We are disinvesting not from South Africa but from the rest of Africa, and many people ask how we can say we are contributing to development there at all. We have to start with some of those fundamental economic factors and build on them, but I think the exercise would be extremely useful. It might bring us to a realization of the role we have to play, including issues like debt relief which we keep ducking and yet are

fundamental to the ability of these countries to get up off their knees and help themselves.

Chairman LELAND. Mr. Walker, were you going to say something?

Mr. WALKER. I was going to say these words that we use, Mr. Chairman, of sustainable development, what really do they mean? I think we haven't really answered that question, any of us, yet. I don't like those two words because I think they are meaningless—sustainable development. They don't mean anything. I think sustainable livelihoods. The jargon phrase is sustainable development. That is then backed up by sustainable agriculture. They are pretty meaningless phrases.

I think sustainable livelihoods gets closer to what we want; namely, how do communities create wealth from their own resources which is sustainable? Now, if that is roughly what we are talking about, then the next question is how do you persuade US AID and the World Bank and OXFAM and CARE to pursue those policies and measure their success against that question?

Mr. GILMAN. Would the gentleman yield? We met just yesterday with the president of the World Bank, and he emphasized that the criteria for the project is sustainable economic development.

Mr. WALKER. Well, we are holding a seminar in the United Kingdom with the World Bank acting as the honest broker, my own institute, in October, and I am hoping that some of the Members of Congress will be present at that, because we know that the World Bank still rejects a great deal of the advice it receives from its own environmental experts in terms of supporting or not supporting certain programs, and there is a task within the World Bank to make their declared objectives work in the decisionmaking process of the Bank itself.

I think within all these major institutions the World Bank has made quite considerable strides in the right direction in recent years. There is still a major gap between getting the expert advice of two groups of people, anthropologists on the one side, who understand the human mechanisms, the people mechanisms, the community mechanisms which are essential to self-reliance on the one side, and the environmentalists who understand the damage that you do as you spend money. Most dams in this world—the best are 50-percent now efficient. Many are 30-, 25-, 20-percent efficient because they are silting up with top soil which is flooding into them.

We continue to make mistake after mistake. We never learn. We continue to make the same mistakes in our decisions within our AID programs.

Mrs. ROUKEMA. We have just about run out of time because we have a vote, but I do want to make a comment on what you have just said and then submit to you a question for a written response. My question concerns the point of Mr. Stoel's statement regarding the MDB's. Of course, this includes the World Bank, and I would just make the observation that we have a unique opportunity now with Mr. Conable taking over as President of the World Bank. I think he understands not only the bureaucratic problems, but also some of the systemic problems. The Bank is being urged to use more structural adjustment lending, in order to implement major domestic reforms within the developing countries.

I am concerned that in our haste to demand reform we might swing the pendulum too far in that direction and I would like to know your response to that perspective.

Mr. STOEL. I would be happy to provide that.

Mrs. ROUKEMA. Thank you.

[The prepared statement of Mrs. Roukema appears at the conclusion of the hearing, see p. 57.]

Chairman LELAND. The Chair would like to recognize the gentleman from New York.

Mr. GILMAN. Thank you, and I recognize our time has run out. I just want to thank Mr. Stoel for his favorable comment on our proposed legislation, and we look forward to trying to move the legislation. We will need a lot of support out there, and I thank you for your supportive comment.

I would like to put a question on the record and ask you to submit an answer. What more can we do through our Peace Corps to bring about a greater thrust in the environmental area? I know they have done a lot of good in the past, but I am sure we can improve in that direction. Thank you, Mr. Chairman.

Chairman LELAND. The record will be open for any responses to questions that members would submit to you in writing. We would appreciate your response.

Let me suggest to those who are curious about the statement that the time has run out only means that we are going to recess for the time that it takes for us to go vote, and we will be back. I would like to now excuse our current witnesses and thank them both very much for their participation.

We will convene in just a few minutes.

[Recess.]

Chairman LELAND. The committee now welcomes Mr. Ray Love to this hearing. Mr. Love is the Deputy Assistant Administrator of the African Bureau at the Agency for International Development. AID, we understand, is developing a stronger focus on the environmental and natural resources management problems of Africa as a result of the recent famine crisis. I am hoping that AID has indeed developed a stronger focus on the overall development crisis faced across sub-Sahara and Africa.

Mr. Love, we look forward to your testimony and to hearing of your agency's efforts to better assist the people of Africa as they deal with just massive problems in a number of areas. We thank you for coming and participating today.

STATEMENT OF ALEXANDER R. LOVE, DEPUTY ASSISTANT ADMINISTRATOR FOR AFRICA, U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

Mr. LOVE. Thank you, Mr. Chairman. I realize we are running somewhat late this morning, so I would like to dispense with the reading of my lengthy written statement which I have submitted, and have that included for the record, and instead read from a few pages of just generalized comments, and then I think we can move to the questions.

Chairman LELAND. Without objection, your full text will be entered into the record, and we appreciate your summary.

Mr. LOVE. Thank you, Mr. Chairman.

I greatly appreciate the opportunity to present the views of AID to the committee on the impact of the environmental degradation, on Africa's food security, and to review with you our efforts as a major donor in Africa to assist in dealing with these issues.

The recent drought has again reminded us of the fragility and vulnerability of Africa's natural resources. In the past 10 years of AID's experience on environmental matters we have learned that the problem must be addressed in a broad context that encompasses food security and population growth, as well as through specific localized environmental projects and activities.

The overall fundamental problem of environmental degradation results from two fundamental causes. One is low agricultural productivity, and the other is high population growth rates. We see the need to intensify food production per unit of cultivated land and to slow population growth as essential factors in any kind of overall environmental strategy for Africa. This will require the joint efforts of the Africans and the donor community working together in the context of Africa's distinct conditions.

To effectively address the fundamental and environmental needs of Africa, a number of critical elements need to be included in this broad gaged approach. Most importantly, as was stressed by the earlier witnesses, the Africans themselves must take even stronger leadership in bringing about the necessary changes to reverse the decline of the environment. To their credit, they have not only accepted this challenge, but initiated such steps in the action plan that was set forth in the UNGA special session on sub-Sahara and Africa.

Donor assistance in the environmental fields must be much better focused so that the highest priorities can be effectively dealt with given the human and financial limitations of African institutions.

Economic policy must be adjusted to increase producer incentives and to free up market and trade systems so as to make food production more profitable. The recent momentum to slow population growth rates must be given increasing attention and resources, and I was happy to see that point made in the statements of the earlier witnesses.

Suitable agriculture technology must be developed, tested and made available to the small-scale, low-resource farmers who comprise 80 percent or more of Africa's farmers, the majority of whom are women. There must be a broader recognition by both Africans and the donors alike in resolving the environmental concerns on a sustainable basis that will only result in long-term efforts, and we greatly share, I think, the statements that were made particularly by Mr. Stoel that what we are looking at here is an extremely long-term challenge, and it has to be addressed in terms of a long-term effort.

AID is active in these areas in the following ways. We have increasingly given our African program greater focus so that we believe that it is better managed with resources being directed at priority concerns in order to enhance their impact. We are especially pleased with our efforts in agriculture research, which was touched on this morning, family planning, and economic policy reform. We

believe a number of positive results are beginning to appear across the African Continent.

We hope to maintain our assistance levels to the environmental management and training despite planned cutbacks in AID resources that will come from the current budgetary exercise. We have relied on the PVO community to carry out 25 percent of our portfolio associated with environmental and concerns. Related to this we have planned a workshop with PVO's working with INTERACTION to ascertain the possibility of a joint effort on agriforestry and soil and water conservation in Africa.

This follows up on a series of workshops that we have had with the PVO community increasingly over the last couple of years. This will be the first time that we have attempted to meet with that community to focus on a program specific area rather than broad mechanisms and country priorities. Our agriculture research plan for Africa, which many of you are familiar with, sets forth the framework of our interventions in the area of agricultural research, including natural resources in a pragmatic and a prioritized manner.

Touching on the points that I think were mentioned by the earlier witnesses, we do feel, based on the work that we have done in the last couple of years, that we do have a targeted long-term strategy statement for agriculture research that lays out the broad framework within which our mission programs would operate and also constitutes what we think is sensible basis upon which to work with the other donors in coming up with a combined approach to agriculture research.

We have used this plan in our dialog with the other donors as part of our donor coordination effort, and we have used it as one of the primary inputs in our dialog with the international research centers and with the World Bank. The result of that is an establishment of a new mechanism at the World Bank focusing on the development of a special program for agriculture research which was started last fall.

Much of the emphasis for that new effort did come from AID, and we think that a result of that, which would probably take a year or two to fully materialize would be a better coordinated effort on agriculture research between the donors themselves, multilateral development banks, and the Africans.

We have also established—begun to establish—a comprehensive early warning system to monitor future drought and famine, as well as provide a database for more accurate assessments of natural resource conditions, and that touches on, again, I think two of the points that were made this morning. One is the importance of looking at the high technology satellite technology as an input, not just to early warning systems where it has important but limited applicability, but also as a tool that can be used across the board in general monitoring and program development in the environmental area.

We are preparing a natural resources assessment plan. We are looking—it is not yet finished—we have been working on it now for probably 9 months. What we are hoping we will eventually develop out of it will be a focused document along the lines of what we did develop in agriculture research that can be used as broad general

guidance for our mission programs in the future, one of which we will hopefully be able to associate ourselves with for a considerable number of years. For example, the timeframe on our agriculture research plan is 20 to 25 years in terms of the targets we are looking at.

Those are the key points, I think, of my summary comments, and I would like to extend our thanks to the committee for placing the importance and attention on the complex and very real problems of Africa's deteriorating environmental conditions in examining means to alleviate it. Thank you, Mr. Chairman.

[The prepared statement of Mr. Love appears at the conclusion of the hearing, see p. 75.]

Chairman LELAND. Thank you, Mr. Love. You mentioned the fact that you have long-range plans for addressing the crisis in the sub-Sahara both in the agri-research area and also in the environmental area. Can you touch on some of the specifics as to what your plans are? I would also like to ask if you would give us the degree of priority, if you can, that you are placing on these efforts.

Mr. LOVE. Well, let me back up a little bit on this whole question of long-term planning because it was such an issue in this morning's discussion. We do develop comprehensive strategies for where we are going in Africa. We developed a very comprehensive strategic plan 2 years ago in Africa, really laying out our priorities, touching on issues such as economic policy reform, touching on the long-term issues of agriculture of which we highlighted the research issue was one of the most critical ones that needed attention, touching on issues such as child survival and touching on manpower development and on the natural resources base.

That plan is still in existence. Out of that we developed subsequently a shorter timeframe, 1987–90, a report at the request of the Senate Appropriations Committee, and that was submitted to that committee earlier this year, and I think it is available as part of the public record. It gives, I think, a concentrated focus on policy, development, health matters, research, et cetera, over the shorter timeframe as to where we are going given our current concerns and current budgetary situation, but we do have and maintain and continue, I think, to modify a long-term strategy under which our operating country programs are developed trying to recognize, I think, the differences of individual countries.

Now, what we did in the course of agriculture research where we found a fairly substantial amount of money, $70 to $90 million a year, going into research activities but considerable disagreement about whether we were researching the right crops, whether we were researching in the right countries on this situation was a need to back up and examine priorities in that area. We did that. We broke Africa into separate climatic zones, settled, I think, on some of the primary crops such as maze, sorghum, and millet in the areas where the environmental concerns are the greatest.

It also decided to concentrate in certain countries in terms of undertaking the basic research. Along with that we have increased our working relationship with international centers and with the World Bank to attempt to get them to focus their priorities also, so what we have out of it now, I think, is a strategy, and we have a copy which I would be happy to make available to the committee

and/or for the record, which lays out in detail the countries and crops that we see as the highest priorities to work on, and a strategy for the smaller countries that looks at them as a secondary user of basic technology generation in some of the other countries.

All of these, of course, entail detailed research into new crop applications basically of crop varieties that are African, and I think the experience that we have faced with organizations such as ICRASAT that worked in the Sahel trying to adapt varieties out of Asia to the Sahel has convinced the international centers and the donors that you have got to start basically from scratch in Africa with African varieties to a considerable degree to do that.

That is where we have come in research, and I think it is a workable document, and initially what we have done is it has allowed us to cut out of our budgets and activities that we concluded were a secondary priority and to begin to refocus on rechanneling these resources and the high priorities in the future.

We are not yet at that point in the natural resource assessment. It is a very complex area, as this committee knows, but we are hopeful that we can do that, and out of that we can come up with some guiding principles of where we might go.

Chairman LELAND. Thank you, Mr. Love. Let me ask you, too, about your participation in the recent conference that was held on long-term development requirements and long-range plans for resolving the African crisis at the United Nation. To what extent did the United States play a role there, and more specifically to what extent did we play a leadership role in helping to formulate the so-called long-range plans.

Mr. LOVE. Well, the AID and the State Department jointly also with input, obviously, from the Treasury Department considering the broader financial issues, played a fairly strong and coordinated role working with the steering committee there, but I must say that the bulk of what came out of that final document up there was developed by the Africans themselves. There was an awful lot of back and forth trying to get the document focused a little bit more than I think the earlier drafts did. But what you saw, I think, coming out of the U.N. special session was a very admirable effort on the part of the Africans themselves to set their priorities, most of which, I think, are shared by the donors themselves. It was quite a remarkable performance from our point of view.

Chairman LELAND. So we pretty much agree with the results that they have come up with in terms of the resolution to the problems faced in sub-Saharan Africa?

Mr. LOVE. In the broad, yes.

Chairman LELAND. Have we done anything to commit to any future support of the suggestions that have come out of the special session?

Mr. LOVE. Well, I think there are sort of a couple of issues here. One is the first step which I think the Africans themselves have already embarked on, is establishing a mechanism to try to follow up on the very broad gauge prescription that was set forth in that report. Mr. Diallo has been down. He has talked to us on a bilateral basis. They will be presenting to the OAU meeting next week, I believe, a proposed scenario for donor coordination and specific

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follow-up actions with the donors and with the individual African countries themselves on the report.

What you are going to have to see here, I think, is the process which will probably stretch out at least 3 to 4 years on a country specific basis to begin to decide exactly how that overall plan applies on a country basis. We have already told them—going back to agriculture research again—that we are prepared to commit ourselves to close to a billion to a $1½ billion over the next 15 years on a sustained basis for agriculture research, because we feel they are going in the right direction, and we feel that we are convinced enough that that is a priority. We have not made similar commitments in other specific areas.

Chairman LELAND. Thank you. Let me now yield to my colleague from California, Mr. Panetta. I will come back to ask you additional questions.

Mr. PANETTA. Thank you, Mr. Chairman. The focus right now—I mean if you had to describe in a word the principle focus of eight projects, what would you say?

Mr. LOVE. Well, first of all—I don't want to evade the questions of projects, but I think it is better to focus on culture broad programs because part of what we put into Africa, in fact, a substantial amount, does not go into program assistance, in fact, quite the contrary. We have been trying to shift our own portfolio and to encourage the other donors to increasingly shift their portfolio to more fast disbursing assistance and to tie it to what we consider to be one of the highest priorities, which is the policy reform issue.

We feel most of Africa has suffered, and it has impacted very negatively on the rural areas, on agricultural production because of bad policies particularly in the agricultural area. So one of the major thrusts in terms of resource transfers has been in the policy reform area. We did establish or attempted to establish a $500 million, 5-year program for economic policy reform. We initiated that last year with $75 million in five specific countries to support policy reform efforts that were initiated by the Africans, and that was money that was not preprogrammed. It was quite a different approach to aid than we normally follow when we pick the countries and we set the budgets up front in that congressional process. We set this aside as an unprogrammed pool of resources.

Then we responded to proposals from the countries for policy reform, and we would like to keep that mechanism going. When you back up—and some of this is also done out of the individual country programs. A large percentage of this money obviously comes out of the ESF account. Some of it comes out of the development assistance account. When you back up from that, our next biggest application is in the area of agriculture to match what we see as necessary improvements in the policy reform area.

We think we helped to develop the technology over the long run, develop the institutional base necessary and trained the manpower to go along with what is required in the agriculture area. We see these as long, long-term investments, whereas the policy reform, we hope, even though it is obviously something that needs to be worked on over the long run, we are hoping that we will see some of the major returns from policy reform investments in the shorter term.

In the health area, we are concentrating predominantly on child survival as one of the most cost-effective methods of making an impact on Africa, and we have a major effort in population. I know the figures don't come up to be as large as this committee may wish to see or as some of us would like to see, but the constraint there is not a problem in terms of the bureau's willingness to support it. It is a problem the Africans continuing to evolve their own support for population, which is not happening, to the point where they can absorb more.

A large amount of money is going to our bilateral program, and a substantial percentage is also going through our central program, and then overall we have a very large effort that sustains general human resources training through some of our central programs and through our bilateral. Those are some of the key thrusts that are in there which are consistent with some of the concerns that were expressed this morning, and I think we are fairly clear on that, and we have been sticking with that general prescription now for quite a few years.

Mr. PANETTA. Let me ask you in the area that I think everyone feels there has to be an increased emphasis on, which is the small-scale resource-conserving projects, do you have any idea how many of those kinds of small-scale projects you are now supporting?

Mr. LOVE. I don't know the number of individual projects. We estimate that we have on our books probably $140 million worth of activities in forestry and other natural resource related activities, plus maybe another $120 million in activities that were supported through Public Law 480. By that I talk about on the books under implementation. That reflects the activities that were developed over a period of maybe 5 years.

Mr. PANETTA. Does that represent a large proportion?

Mr. LOVE. Well, you figure about $370 million annually is the overall development assistance budget level, and out of that about $80 million is Sahel, and our ESF package along with that this year is down to around $280 million, but this has been as high as 400.

Mr. PANETTA. One of the things, as you noticed before during the testimony, I think a lot of Members are impressed by the development programs that the IFAD has been involved with on a low scale, sustainable direct value to farmer project, and the question that occurs to us oftentimes is why can't our bilateral programs in Africa kind of replicate the IFAD success stories.

Mr. LOVE. Well, I think one of our concerns which I have had, if I understand how they operate, is mostly on a joint basis working with other donors, and effectively they have no field staff. They operate out of a room and buy into other activities that are designed by other donors, in many cases, World Bank projects, as I understand it.

Our concern, and we have had a lot of exchange with the PVO Committee, in particular on this, is how we can develop mechanisms for administering what are complicated packages of smaller projects. Obviously, even though we have a larger staff overseas than others, if we are in the primary project development phase, it becomes very manpower intensive. We have looked at developing mechanisms to work with the PVO's, some of which we have initi-

ated in the last 3 or 4 years, one of which we refer to as the Umbrella Project. It is a modification of techniques that were developed in Asia of setting up a line of credit in countries like Kenya, Samalia, Senegal, Chad, under which both indigenous and United States PVO's might participate in smaller projects using that as a wholesale mechanism so the individual PVO's can go off and work on the small projects.

In some cases using some of the larger PVO's as intermediaries to manage and assist and rechannel resources to even smaller PVO's, particularly the indigenous ones, and we think that is a mechanism that in some of the larger countries where we can fund large amounts is extremely useful at getting to small-scale activities, where we wouldn't be able to do them ourselves. We have worked extensively with the Peace Corps, having them integrated into some of these programs, particularly looking at forestry in trying to develop joint programs there.

We have in a number of countries where we didn't even want to establish a mission apparatus, such as in the Comoros, gone to a PVO—in that case it was CARE—and we said to them, "You take the responsibility to go out there and basically analyze the country's situation, develop the strategy in a package of small projects, and we will end up funding it and look to you as basically the implementing agent." These are techniques that we have been working on particularly in the last 2 years and particularly with, I think, the increased maturing of the interaction in a group with the PVO's, and I think with some success. There is more that can be done there, and it is through this mechanism that we are hoping if we have this session in the next couple of months with interaction and selected PVO's that we can come up with a better focused strategy specifically on the forestry in the natural resource area.

Mr. PANETTA. What do you see as your principal barrier right now? What is your biggest problem?

Mr. LOVE. My biggest problem in doing the small scale projects or in running the program?

Mr. PANETTA. Both.

Mr. LOVE. Well, I think the biggest problem in running the program right now is the uncertainty of what is coming down on the budget situation and what it is going to do to us. It is requiring us in some cases to put on shelf new programs or new thrusts that have been designed, and this includes some forestry activities and some natural resource activities because our budgets are being cut. We don't want to get anymore stretched out than we are. We feel we have to implement what is on the book with some realism that if we buy into a situation that we can pay for it.

We figure we are going to be in very bad shape in 1987 and probably in 1988, and I am hopeful that after that it will begin to ease, but it is not yet clear on the situation.

It makes it very, very hard, I think, to particularly change directions when we have uncertainty on the budget situation. I think one of the more pervasive, longer term problems goes back to the issue that was raised this morning, which is formulating and sticking to longer term strategies. We did a report for the Kassebaum hearings at the Senate Foreign Relations Committee a couple of

months ago in which we went back and pulled together an analysis on where our aid had gone in Africa over the last 20 plus years primarily in response to concerns of have you been putting money in research for 20 years and nothing is happening from it. Why is this?

What I think that report shows is a very erratic track record in terms of staying in countries and staying in sectors over that period of time, so that when you really look at agriculture research, for example, you find out that we have not, except in a few special cases such as Kenya, stuck with some of these issues over the long timeframe that is necessary to achieve results. That problem is one, I think, we have to continue to struggle with. It is something that gets impacted on by political changes in the countries involved, a kind of governmental change that the Government of Sudan is going through today, a lot of issues, some of which are beyond our control.

I think that is one of the most important aspects of trying to refine our program thrust in the future is to find a way to stick to the course for the length of time that is necessary to address the very serious problems that we face in Africa.

Mr. PANETTA. Thank you, Mr. Chairman.

Chairman LELAND. Mr. Love, let me ask you something. Have you and Mr. McPherson ever thought about going to war with the Defense Department over getting some moneys from them to do some things that you need to do?

Mr. LOVE. I think we have thought about it a lot of times. I don't think——

Chairman LELAND. It doesn't look too good?

Mr. LOVE. Nobody ever decided to do it.

Chairman LELAND. It is hard to argue with the Defense Department, isn't it? Have you seen some of those weapons that they have over there? Pretty tough.

Seriously, I think that the weapons that you and Mr. McPherson have are much more effective in terms of creating peace in the world than the ones that they have. I like your arsenal. I don't like theirs. This belief is conjecture on my part.

Let me ask you one last question. What exactly is AID doing to counter the incredible cycle of destruction caused by the desertification and the deforestation? Do you have real plans—are going you really planning to do battle with these incredible problems in Africa?

Mr. LOVE. Well, frankly, I really don't know how much we are going to do at the country level. As I said, one of the problems that we have had in trying to formulate this natural resources plan has been the complexity of trying to decide exactly how to interface with this. We have clearly done over the years an awful lot, in the last 10 years in particular, before this administration and to some degree during this administration working in renewable energy, working in forestry interventions.

A lot of that, I think, when we sat back and evaluated it, we concluded that it was ad hoc. A lot of it was not as productive. Some of it was on the situation. I think one of our concerns, and what I tried to express in my written statement and in my summary was that there are a number of broad forces that are driving the envi-

ronmental problems in the rural areas. One of them clearly is the population. It seems to me that if we can make progress in the population area, we will do as much as we will in any area in beginning to impact on what is going on in the rural areas.

A second area is our concern about what is happening in the agricultural sector. We think that as the population growth has taken place, and since Africa is basically rural, it takes place in the rural area, the pressure is for these people to move into more marginal lands or abandon traditional practices such as fallow the land so that the land gets overused, and the population pressure using low-technology traditional technology in the area is contributing to the environmental degradation, so we feel that the agriculture sector itself, both from the policy point of view and encouraging more intensification on some of the better endowed lands and through improved technology, which we expect will take a long time, along with the population.

Our issue is that overlay the broad forces that are contributing to the degradation, and that doesn't answer the question of just exactly what we do when we get out at the local level and start looking at the hands on programs. I can't conceive that any of our strategy at the local level will necessarily of and by itself begin to impact in quantitative terms sufficiently to offset the magnitude of the problem that we are facing.

What we might be able to do, it seems to me, going back to Mr. Stoel's comment this morning, is develop technologies that are workable at the local level that can be picked up and replicated by the Africans themselves and by the other donors. It would seem to me that when we do finalize our strategy, we will be more oriented toward trying to develop the models that can be picked up and replicated by other people, rather than hitting a meaningful percentage of the hectares that are being impacted by deforestation or desertification over time.

Chairman LELAND. Should the Congress come into play here and give you a greater mandate?

Maybe I shouldn't ask you that. Maybe I should ask Mr. McPherson that question.

Mr. LOVE. No; I'll try to answer it. I think the exchange between the administration and Congress on what are meaningful priorities in Africa is absolutely essential, as we have stated, and I think will continue to state. We don't like earmarks as such. We would prefer to reach agreement on general program directions and/or agreement on some measures of when we are going to achieve those things. But the earmarks, I think when you look at them in the cumulative, they end up being, in many cases, counterproductive to the overall effort, which is one of the things that Africa faces right now. Earmarks that have been placed for other reasons in other parts of the world are gong to have a multiplying effect on Africa's budget in the next 2 years.

So, I think that we would like to have the exchange. We would certainly like to get a strong expression of where the committees would like us to go, and we would very much like to reach an understanding without outside groups such as the environmental groups on what we can do to increase over time a stronger awareness on the part of the American public of what we need to do in

the long run in Africa, and a strong support not just for bilateral, but particularly for our aid programs in Africa, because I do think that as we came out of the drought, where clearly we had the attention of most of this country, it has been extremely difficult both to communicate to them Congressman Wolpe's point of the magnitude of the response and the success of the response, but particularly to get them to relate to the more complex long-term development issues which are not as clearly understood.

Part of that may be our problem, but part of it, I think, is that it is just a more complex issue.

Chairman LELAND. Would your bureau welcome participation in a conference with different environmentalists and others concerned about desertification and deforestation?

Mr. LOVE. Sure. We would be very happy to do that.

Chairman LELAND. Thank you very much, Mr. Love. We appreciate your participation. The Chair is going to recess one more time to go and vote. I will be back no later than 15 after. Thank you.

Mr. LOVE. One more point, you had sent us a letter also on the question of locusts. I brought some briefing stuff which I will leave with the committee that gives a little bit of an update on what is transpiring on the locust situation, and if you want to talk about that a little later, we would be happy to do that.

[The information referred to above retained in committee files.]

Chairman LELAND. Yes, thank you. Are you going to be around for the rest of the hearing?

Mr. LOVE. I am going to stay, I think, for the next testimony.

Chairman LELAND. Very good. I would like to talk to you about the locust problem a little more. The other thing I would like to see is the report that you gave to the Kassebaum hearing.

Mr. LOVE. I have brought this morning, if you would like them, one is a copy of our strategic plan, which wasn't released publicly, but we would be happy to leave it with you, a copy of the report that we submitted to the Senate Appropriations Committee, which I would be happy to have put into the record, a copy of our agriculture research plan, which I would also be happy to have put in the record, plus the copy of the history of our aid to Africa, which if you wish to put in the record, I'd be happy to have you do that, too, and I will leave all of those with you.

Chairman LELAND. Well, without objection, those materials will be put into the record, and are appreciated. Thank you very much.

[Recess.]

[The information referred to above is retained in committee files.]

Chairman LELAND. The hearing will reconvene. The second portion of today's session focuses on the Foreign Disaster Assistance Program of the United States. Disasters take a heavy toll on life and property in developing countries. Their victims tend to be the very poor, the hungry, and the malnourished in disproportionate numbers. Famine, in particular, is obviously a disaster of great concern to this committee.

In 1984 the world was horrified at the severity of famine sweeping sub-Saharan Africa. Millions of lives were in danger; tens of millions of people were affected. While the death toll will never be

known, it is certain that several hundred thousand people starved to death in Ethiopia, the Sudan, and the other countries.

What concerns this committee is the fact that this country, along with the rest of the donor community, was not prepared and not organized to detect the onset of famine and was not able to mount an effective response without considerable delay. Both the United Nations and the U.S. Government were forced, in fact, to establish new mechanisms to handle the emergency relief response.

Our purpose today is not to criticize the African famine relief operations, but to identify shortcomings in the Disaster Assistance Program. Disasters take an ever-increasing toll. Famine, as we heard earlier this morning, could well return to regions like the sub-Sahara. We must be better prepared in the future than we were in 1984. We must develop more effective disaster early warning systems, better disaster preparedness and prevention programs.

The committee has drafted a study with certain recommendations for enhancing the Disaster Assistance Program of the U.S. Government. Our objective is to identify how we can strengthen this vital foreign assistance program.

Our next witness is Julia Taft from the Office of U.S. Foreign Disaster Assistance at AID. She has the primary responsibility for coordinating and managing the U.S. response to natural and man-made disasters of all types around the world. OFDA was created to replace ad hoc disaster relief efforts and now manages important disaster preparedness and prevention programs as well as relief functions.

Julia Taft is the Director of the Foreign Disaster Assistance Office. Ms. Taft, the committee will be interested in any improvements or enhancements in the Disaster Program you think might be appropriate. You are aware, I believe, of a short study the Select Committee on Hunger has completed which recommends certain changes in the program.

We welcome your comments on these very critical issues, and we look to you for your recommendations.

STATEMENT OF JULIA V. TAFT, DIRECTOR, OFFICE OF FOREIGN DISASTER ASSISTANCE, U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

Ms. TAFT. Thank you very much, sir. I am very pleased to be here, and I also want to express our appreciation not only in OFDA, but in AID for the very thoughtful work that the committee has done not only throughout the tenure of the African famine, but also this very constructive study about the role of OFDA and raising very important questions about disaster assistance.

If you don't mind, I would like to just submit my statement for the record and move quickly into responding to the specific recommendations that you all made so that we can have a chance for discussion.

Chairman LELAND. Without objection, your full text will be submitted for the record. We welcome any additional comments that you might have.

Ms. TAFT. Thank you very much. As you know, I only began as Director in January.

Chairman LELAND. Yes; we would like to commend you for your new appointment, I might add.

Ms. TAFT. Thank you. Well, let me just say the office is not a disaster. The office is alive and well, and we are thriving on a variety of fronts, not only within the context of the aftermath of the famine, but also on worldwide work both in early warning systems and the improvement of host-country capabilities to actually manage disasters for themselves.

As you know, we feel very strongly that when disasters occur in the host country, it is really the host country that must take the lead in being able to orchestrate a response and that we do whatever we can to organize the U.S. Government in our own private sector assistance in that behalf. There have been some really stellar accomplishments, I think, that I would like to just mention before we get into the specific recommendations, because you were asking earlier about what has happened that has really been effective.

I would like to point out that last November with the volcanic eruption in Ruiz in Colombia, there was a massive outpouring of assistance. The U.S. Government has spent about $3 million on the Ruiz volcano. Mostly in later months in the training and the working with the host country to be able to establish their own warning systems, their own volcano monitoring network so that they are truly self-sufficient.

They are at that point now, and they are able to, in their own judgment, and I believe in ours as well, to be able to manage their crisis and manage their own preparedness. This is true in programs that we have in Chile with our early warning systems, in Bangladesh that have now been picked up by the Bangladesh Government that really have resulted in life-saving measures.

We think that within the African context, the large mobilization not only from the international donors and the private voluntary organizations, but also the host countries themselves in establishing their own relief organizations and pulling together their ministries, and pulling together all of their assets to be able to deal with this constructively is an institutional mechanism that we want to sustain and encourage and support, because in the end, they are the ones that have to bear the responsibility that we are helping them with.

In terms of institutional development, we think this is very important, and that, I think, ties in very closely with the theme that the select committee's report had on mitigation and preparedness. Preparedness can be technological, but in the end it is really the human resource side that has to bring the technology into changed attitudes and trained people and a commitment at the local level, and this is what we are doing.

With regard to some of the specific suggestions of the report, money, I guess, is the main one. Does OFDA have enough money to do a job. As you well point out, the $25 million level has been inadequate in the past only because there have had to be major supplemental appropriations, particularly for Africa.

I think that raises a question as to whether or not OFDA should in its budget be responsible for the total contribution for disaster assistance. We believe definitely that should not be the case. Our

business is to leverage the support, the commitment, and the resources of others whether it is from the private sector or international donors or AID itself, and I think we have been able to do this very well.

We are working so closely with the geographic bureaus, in particular, to make sure our money is used as seed money, that we raise questions, we push issues, but it has to be a collaborative effort because, as you well point out, disasters are really the product of failed development or inadequacies in development, so we can't just say this is the responsibility of OFDA to deal with this emergency problem, and then at some point in time in the future hope that the development planners will be able to pick up. We have got to work on the continuum, and we are doing this, I think, in a very good way by sharing our people and sharing our resources.

I think the $25 million is adequate. We are concerned with all of the discussions about budget cutting that maybe Congress won't even give what the administration asks for. We are not sure exactly what the current level is that is being discussed, but $25 million is what we need, we feel, and we hope that that will be provided.

In addition to that, your proposal that we get a specific funding of $50 million for a contingency account, we feel it is probably not necessary. As you know, we have borrowing authority up to $50 million. It is my understanding that we have never had any problem in the past tapping into that borrowing authority when it was needed. As you know, it is usually at the end of the fiscal year when, perhaps during hurricane season, like now where the money needs to be supplemented. That is the same time where there are normal program deobligations throughout AID, and those funds have been able to supplement as needed.

Now, in extraordinary situations as we have had with the drought and the famine, this really does have to be a partnership between Congress and the administration. It would have been very difficult to foresee. We needed $135 million just for OFDA and get this money ahead of time. The fact that it was a partnership between the administration and Congress that resulted in the supplemental appropriation, I think, is proper and appropriate, and should anything of that magnitude occur in the future, I think that we ought to be coming up to you and talking to you about a supplemental if it is required. But we do have our $25 million, I hope, plus the borrowing authority, and we feel that that is enough at this point.

Chairman LELAND. Ms. Taft, let me stop you there. You wouldn't reject it if we gave you a $50 million contingency fund, would you?

Ms. TAFT. I wouldn't mind if you talk to Obey and figure out what he is going to do for us this time. I don't think we need it. I'll tell you why I don't think we need this.

Our authority is very broad, as you know. I think it is the best authority that I have ever seen in the Federal Government, to do with good judgment, quick response, and appropriate responses. If our money is easy to tap, too easy to tap because we have a lot of it, my sense is that that takes some of the pressure off of the bureaus and other donors to come up with their commitment. When you get cofunding, you get cocommitment. When you are working

on joint projects, you get people talking together, and it can't be the disaster people only who have all the resources who are making the decisions. These have got to be cooperative and collaborative efforts.

I do feel if we do have too much money, we are going to be looked to as this is your problem; you solve it, and the why my approach has been, and the way I feel OFDA's approach has to be is that we are in this together, and we have got to look at all the resources and pull them together because we can do the work for the first 60 or 120 days or whatever, but in the long run if there are development problems, we have got to buy in their commitment early on and work with them throughout.

I think the amount of money we have is adequate. If we get that much money, I would be pleased.

Chairman LELAND. You are one of the few people in Washington to express satisfaction with your budget. In the last few years it has been a little strange with people who run these agencies, I guess, because of the mandate and philosophy of the Reagan administration. But I have served on the Appropriations Committee in the State legislature, and we have been here for a few years now on this committee and other committees of the Congress where people have always asked for more money in order to better handle their agencies and do their job better.

In 1964 your appropriations was $25 million, and you are asking for the same now for 1987.

Ms. TAFT. Well, we have changed business a lot. For instance, and there are others in this room who know more about what the earlier days were of OFDA, but, for instance, right now we are really examining very carefully one of the major investments we have got, which is an $11 million stockpile, because in the past, the disaster response has been send the blankets, the tents and the food in whether it was for a cyclone in southeast Asia or an earthquake or whatever to send the commodities in—very expensive airlift, very expensive response.

We are examining that very carefully because—again, this is a development perspective here, but one of the concerns that we have is if we send in and encourage the sending in of commodities, does that create an economic dislocation in the host country that they are being inundated with commodities that if there were money in the economy, they could buy them locally. Our sense is that if you can find ways to help the local economy during a disaster by sending in funds as opposed to expensive airlifts, that you are going to have a positive development as well as a quicker response in your disaster, so that is just one example of the leverage.

Another example of the leverage is working as creatively as we can with such agencies as DOD, which I know you mentioned earlier, but we are working with them and have gotten some relief on some of the expenses that they have charged in the past. We are working with NOA. We have worked with the U.S. Forest Service. We are looking at agencies in government that already have a mandate or have the capabilities so that we don't have to buy that technical assistance or that resource on the street, and the more we formalize these links with those other agencies that already have their overhead covered and their technical competence in

place, and we involve them in our response and our programs, we make our money go a lot further.

One other example I would just like to share with you, in Mexico, for instance, there were all kinds of concerns about how expensive the response to the Mexican earthquake was going to be to the U.S. Government. When it was all over, we had spent $4½ million out of the OFDA account, but over $60 million was contributed by the American people, some of which was coordinated through us—much was coordinated through us—so we were able to leverage. We could pay for the airlift of other commodities that are needed, or we get the donated time of medical personnel in California or whatever. It is a network that we are building, and that network, I think, would be jeopardized if one had so much money. They would say, "That's disasters. That's not anybody's business except OFDA."

I think the leverage we get is very good. Now, of course that is staff intensive, and if one talks about trying to increase our actual financial resources without looking at the staffing levels, then we can't be any more effective anyway. But I think we are on the right track, and I am not requesting at this time any more than what we have requested which I am afraid is in jeopardy during the current discussions on the budget on the hill.

Chairman LELAND. You are afraid that the current level of appropriations is in jeopardy now?

Ms. TAFT. I don't know whether we are going to get our $25 million is what I am saying.

Chairman LELAND. Well, we have been joined by Congressman Vic Fazio who happens to be on the Appropriations Committee and who happens to be a very vital member of this committee. I am happy that he has arrived here at this very point.

Mr. FAZIO. It is unfortunate for some, perhaps me; fortunate for others.

Ms. TAFT. We made a great justification why we need our $25 million.

Mr. FAZIO. You got it.

Ms. TAFT. I would like to say one other thing in response to the recommendations that you made, and that has to do with a question as to whether or not the infrastructure was adequate to respond to the African drought and famine. Obviously, it was not. One must keep in mind that the famine was just an extraordinary event, and it required extraordinary measures over and beyond what any single ongoing operation could have, and as I pointed out earlier, it was a collaborative effort. It still is a collaborative effort. We are still working on it. The famine is not over; the drought is not over, and we are still working very closely on this program.

In instances where there is such high commitment and interest on the part of Congress and the part of the President and the administration, the incredible support from the volunteer agencies, the huge magnitude of requirements, the extraordinary measures were needed, and the task force was formed to focus on that specifically and to be an integrating force. I have had one other experience similar to this, which I guess makes me feel even more strongly about the fact that a task force created for this type of program is appropriate.

In 1975 with the downfall of South Vietnam and the evacuation of the refugees and the American personnel out of southeast Asia, I ended up running the program for President Ford for the evacuation, reception and resettlement of all the refugees. It was a huge task that could never have been done by any single bureau or office in the U.S. Government because we had 15 Federal agencies and 50,000 people working on this. The fact that one can pull together quickly with high visibility and support, that type of initiative which is very similar to what the famine response created, gives it the visibility and the thrust and the flexibility to move swiftly and quickly with accountability without being——

Chairman LELAND. What happened with the African famine response then?

Ms. TAFT. Well, a task force was formed in which representatives of, I think, 11 or 12 Federal agencies were involved, all of whom had staff that were committed to this, and there was a discreet——

Chairman LELAND. Do you know when they got involved, though?

Ms. TAFT. Well, they started, I thought, in 1984.

Chairman LELAND. It was the latter part of 1984.

Ms. TAFT. That's right.

Chairman LELAND. In 1983, Howard Wolpe led a delegation with Members of Congress to eight different African nations. We spent 21 days there. We came back and we were so distressed with the famine that we saw developing in Ethiopia at that time that we admonished the Congress to do something, and we did obtain a supplemental appropriation for I think, $50 million. But the administration still refused to move for ideological reasons, for political reasons, whatever. The fact of the matter is that the same famine we were addressing in 1984 was there in 1983, we know at least from 1983. It may have been occurring long before we got there. I'm sure that was the case.

The point is that we did not respond until the BBC gave the report to the NBC news. NBC put the famine in the living rooms of the American people, and all of a sudden, the administration began to respond.

Ms. TAFT. I think you are perhaps selling yourself short because I do know as a fact that at the end of 1983 after the congressional interest started, that OFDA was very much involved in raising this question within AID, and in fact there was food on its way at the beginning of 1984. So there was a lot in process.

You are correct in saying that there was no visible task force, but I think that even underscores what I was saying, that you have got to, once you have something of this magnitude you have to do extraordinary means, so the task force was formed in preparation of the requirements of how we were really going to organize ourselves, and again this was preme. But I think there were things that were happening that I don't think the United States has taken account of.

In our own assessment of it, there were things that were happening in 1984 before BBC that were making great strides. Now, of course there were political constraints, as there are——

Chairman LELAND. Let me interrupt for just a minute, if I can, and say that I don't want to take any real credit because we did

what we were suppose to do after having seen what we saw. Indeed, AID did begin to respond. But I guess what I am talking about, and again, I am not getting cross with you, what I am saying is that that task force that you talked about, the coalition of all of those agencies should have been put into effect then—in 1983. We shouldn't have had to wait for 6 months or 1 year before there was real response from our Nation.

Ms. TAFT. Well, I think that is a very valid comment to make, and in the lessons learned, which I don't know whether it has been formally transmitted to you, but among the recommendations from the staff who were involved in the drought and famine, there has been a lot of thoughtful consideration about what would we do if we had to do this again and the issue of how do you accelerate the organization of this ad hoc committee and vest in it the terms of reference it needs to pull together an approach. We are all saying that we have got to do that.

We have had this experience before where we are preidentifying people who were involved in the past so you have a built-in institutional memory in that kind of a new operation. There are a number of recommendations which you will see that talk about how we would do it sooner.

I guess the bottom line is that one has got to make sure that we are talking together all along when these events are happening so that we can respond to this. There is not a person who was involved that wants it to happen again, and I think this is one of the reasons that we are trying to sustain and expand the relationships that we have with the PVO's. We have been meeting with them—OFDA and the PVO's have been meeting. They have been meeting with the Food for Peace people. We constantly meet in AID and outside of AID, and I hope I will have a chance also to be talking with you and the other members of the committee and the staff any time you want because it is of such huge humanitarian concerns that we have got to do it together. So I think we all learned a lesson that we have got to make sure we hear your concerns and that you help us with some of the constraints we might have internally to overcome those whether it is staff or funding or whatever.

But I think we are on track now. Now, there is a big problem that is coming up that I think very much merits, not necessarily a formal hearing, and I am sure Ray Love would agree with me, is we would love to come up and talk with you specifically about the locust problem, because this is one that is potentially devastating all the way from Senegal to India. There have been a number of measures that have been ongoing, but it is another crisis that is unfolding daily, and we need to make sure that we are all talking together on this problem so that you know as much about these locusts and grasshoppers as we do, and that we can make sure we are working on this in concert, but that is another example of a problem that we have been working on, but maybe haven't been as good in publicizing what we are doing, and I am not so concerned about the publicity of what we are doing as the sharing of information with you. It think that would be a very useful example of how we have got to work together, because this is going to be a major thing.

Chairman LELAND. Well, publicity aside, I think it is important, however, that you inform us about what is going on in that situation. I don't mean just this committee, but the Congress itself, because we are most concerned, and we would like to know the things that you are doing. Sometimes we tend to take an adversarial role as opposed to a cooperative spirit because we hear of something that is going on like the potential locust problem, and all of a sudden we wonder where is our response to this. What are we preparing to do? Anything at all?

Ms. TAFT. Well, I think that would be a very useful meeting to have as early as would be convenient for the committee. We will certainly pursue that very definitely. Thank you very much.

RESPONSES TO QUESTIONS FOR JULIA V. TAFT

QUESTION SUBMITTED BY HON. MICKEY LELAND

Question. Ms. Taft, I was bothered by your response to the line of questioning concerning the funding level for the disaster assistance account. We have established that the purchasing power of the dollar has been eroded by over 72 percent since that funding level for the disaster program was established. Your funding level in fact is lower today than it was 20 years ago. The population of the world has grown from 3.3 billion to 5 billion during that time span—dramatically increasing the number of potential disaster victims. It is clear from the record that the disaster assistance account is almost never adequate to meet the needs faced overseas—clear from the frequency of use of the borrowing authority and reliance on supplemental appropriations. These are both awkward mechanisms to rely on, as you know. Often, use of the borrowing authority means that critical development assistance programs are short-funded by several million dollars as the borrowed funds are never repaid. During the terrible African famine emergency of 1984-86, the shortcomings of the funding levels in the disaster account were clear and obvious—and very costly in human terms.

Now, Ms Taft, much of Africa is threatened by a locust plague of Biblical proportions. We have heard ominous testimony here today about the increasing threat of environmental disasters across the continent. How can you guarantee this committee that your office can meet these ongoing threats of such magnitude with a budget that in real terms is barely 20 percent of what it was in 1964? You cannot make that guarantee in my opinion. By refusing to acknowledge the obvious, AID is setting itself up to fall short of its responsibility when the terrible specter of famine again surfaces in Africa. You can be assured that famine will again strike there. The question is, how well prepared will we be this time? How well prepared will we be when we know the threat posed? Next time, no one will be able to deny responsibility.

Again, the question is, the funding level for OFDA is not adequate, that is clear; what can we do together to provide better and more appropriate resources for this vital program?

Ms. Taft, let me say before you answer, that I am looking for a response beyond suggesting that Congress fund the account at the administration request level, because that level is every bit as inadequate as your current funding level. I want a direct answer to the question of how you expect to meet such threats—not just in Africa, of course—with such meager resources.

Answer. Based on our experience over the long term with disaster relief, we consider our request adequate for the anticipated needs of the program. If necessary, we will, as we have in the past, make additional resources available to meet disaster requirements either through exercise of the borrowing authority or supplemental requests. For example, we just borrowed $5 million from Africa Bureau deobligations to meet emerging needs for the African locust problem. The funds were borrowed under the expectation that the regular disaster assistance appropriation for fiscal year 1986 will be fully used to meet other needs worldwide. Once the full requirements for the locust problem are known, we will take other steps to find additional resources, if necessary, to address the problem. We would expect to handle other relief requirements in similar fashion.

QUESTIONS SUBMITTED BY HON. MARGE ROUKEMA

Question. A recommendation of the Hunger Committee's draft report on the U.S. Government's disaster assistance program calls for the establishment of a contingency fund from which OFDA could draw to meet emergency needs overseas. Such a fund would lessen the need for OFDA to borrow from development assistance accounts when its annual appropriation is exhausted.

In your testimony, you state that OFDA looks to borrow first from those funds which will be deobligated in a particular fiscal year. How often is OFDA forced to borrow other than those funds which would normally be deobligated. And what percentage is that of annual OFDA expenditures?

Answer. Normally the funds borrowed by OFDA are prior year deobligations. However, in fiscal year 1985, prior to enactment of the Africa Emergency Famine and Recovery Supplemental appropriations, it was necessary for the Agency to reprogram current year funds to meet urgent relief requirements for drought-stricken Africa. The reprogrammed funds accounted for approximately 35 percent of OFDA's expenditures for fiscal year 1985 not including Africa supplemental funds.

Question. At what time in the fiscal year does this borrowing usually take place?

Answer. Use of the borrowing authority is contingent upon the number and severity of disaster impacts at any given time during the fiscal year. Generally, however, the Office of U.S. Foreign Disaster Assistance would exercise this authority in the third or fourth quarters of the fiscal year. In fiscal year 1985, we found it necessary to use this authority in the second quarter on an interim basis to met the African famine crisis while the Congress proceeded through the process of providing the supplemental appropriations for this purpose. In other past years, we have used the borrowing authority toward the very end of the fiscal year only to meet critical situations such as late season hurricane impacts.

Question. In recent years, has Congress failed to replenish, through supplemental appropriations, those accounts from which OFDA borrows?

Answer. In recent years, the funds normally borrowed for the disaster account have been funds deobligated from prior year activities, so repayment is not necessary. In fiscal year 1985, some current year funds were borrowed for the U.S. response to the Africa famine, but no supplemental request for replenishment was submitted to Congress.

Question. Are there particular lessons we have learned from the Mount St. Helens disaster that could be applied overseas, for instance, in Colombia? And vice versa, what lessons from the volcano disaster in Colombia can we apply at home?

Answer. Important lessons were learned in the aftermath of the Mount St. Helens disaster. We learned the enormous value and need for pre-eruption volcano hazards assessments, baseline volcano monitoring, and the need for interagency disaster planning and response coordination. U.S. Geological Survey geologists correctly forecast the ultimate eruption and hazards of Mount St. Helens volcano 2 years before the volcano's catastrophic eruption on May 18, 1980. The geologists accurately predicted and mapped the hazards and violent character and regional effects of eruptions of Mount St. Helens through geologic study of the frequency, kinds, and scale of past eruptions. This same approach is applicable to a dangerous volcano in a country such as Colombia. In addition, the potential onset of a volcanic eruption can be detected by monitoring physical changes that typically occur prior to an eruption. USGS geologists warned for nearly 2 months that Mount St. Helens appeared to be building toward a major eruption. Similarly, concern about a possible imminent eruption at Nevado del Ruiz volcano was conveyed to the Government of Colombia.

Loss of life and property from volcanic eruptions can be reduced or avoided through coordinated emergency planning and response. A volcano task force composed of Government authorities, emergency officials, and scientists was established at Mount St. Helens during the weeks before the May 1980 eruption. The task force recognized the serious potential for the eruption of the volcano and ordered the evacuation of the region surrounding the volcano, saving thousands of lives. This lesson was also applied at Nevado del Ruiz but with less positive result.

With respect to several lessons we have learned from the eruption of Ruiz volcano, let me emphasize that, in the western United States, we also have iceclad volcanoes. Our experience at Ruiz can be directly applied to these in terms of hazards mapping, warning strategies, and disaster response planning.

The eruption of Nevado del Ruiz revealed the enormous danger of iceclad volcanoes in the United States. The November 13, 1985 eruption of Nevado del Ruiz clearly demonstrated that even a small eruption may result in extensive, catastrophic mudflow activity. Clearly, comparable small eruptions onto the icecaps of

Mount Rainier, Mount Hood, or any of several U.S. volcanoes, might generate catastrophic mudflow activity that might threaten the lives of thousands living near the volcanoes.

The 1985 eruption of Nevado del Ruiz demonstrated, just as at Mount St. Helens in 1980, that the onset of major eruptions can occur with little or no warning. The catastrophic eruptions of both volcanoes occurred with virtually no warning. Although premonitory earthquake activity was observed at both volcanoes in the months before they erupted, the eruptions of both volcanoes followed several weeks of apparently reduced or no earthquake activity. At Ruiz, a group of Colombian geologists had climbed Ruiz's summit to collect gas samples from the vents on the floor of the volcano's crater 1 day before it erupted. The scientists noted no signs of the eruption that would follow the next day.

Volcanologists around the world have been surprised that the continued strong tremor and apparent movement of large masses of magma beneath Ruiz volcano has not resulted in another major eruption. Comparable tremor and earthquake activity at virtually every other volcano in the world has culminated in an eruption of large magnitude. Clearly, the volcanic activity at Ruiz is unlike most observed heretofore. We, and the U.S. Geological Survey have continuing interest in the potential for volcanic activity at Ruiz, but are confident that the host government monitoring program at Manizales, Colombia is capable of operating and maintaining their monitoring and warning systems.

[The prepared statement of Ms. Taft appears at the conclusion of the hearing, see p. 83.]

Mr. FAZIO. Mr. Chairman, I don't think I'll ask any questions at this point. I'm sorry I was late coming in, and I think you have covered most of those that were important to the committee. I would just like to express, briefly, my frustration. I think what you are doing is an exceedingly important thing for the government, for AID. As one who sits on the Budget Committee and the Appropriations Committee, I am simply as frustrated as I have ever been about our inability to fund these programs at the level that I think most rational people agree is necessary.

Why can't we do that? Well, I think it is a much broader political issue, and I can't help but ask for your internal lobbying within the administration. This is an OMB driven program, and much of what we have been battling to try to reestablish, priorities in the budget process and now in the appropriations process, is simply a result of the fact that we are not looking realistically at how to deal with deficits. We are not getting the administration's prestige, the President's communicative ability behind efforts to get cooperation from the American people on paying for the kind of government they want, and they do have a deep well of humanitarian feeling, and they do want to help in Africa and all around the world.

We have had real increases in foreign aid budgets in the last 5 or 6 years, and yet I just came back from a trip to Asia with the Budget Committee. Our Ambassadors are giving us the same line. We heard from Mr. Shultz last night before the Senate Foreign Relations Committee, that somehow Congress is at fault, that we have been failing in our responsibilities, we are not doing enough to uphold our end of the bargain.

We are not going to be able to get the American people to cut domestic programs year after year after year in order to fund international security commitments. They will make those sacrifices, and they will make the funds available to your office if we can convince them that it is necessary—and we can do that—we need the help of the administration at the very highest level.

We have got to have the revenues to deal with our problems, and we can sit here and have a very polite discussion about the need to make bureaucratic improvements, but if we don't face up to that overriding reality, we are just whistling in the wind.

Ms. TAFT. Well, I appreciate what you are saying, and I certainly can't comment for the administration on the full range of the budget question.

Mr. FAZIO. I wouldn't expect you to do so publicly.

Ms. TAFT. And I appreciate your not asking me to.

I would just like to say something, however, about the disaster assistance account. Maybe we have not been eloquent enough in explaining the self-interest to the Americans for what it is our program is doing, and let me just give you, since you are from California, one specific example.

The earthquake in Mexico was the first time that most of the people who are in positions of authority in disaster response engineering design and public works in California had to see a disaster that is so similar to what may happen in California that they are factoring in lessons learned from the Mexican experience about what are the primary, secondary effects, what was the impact on the water systems, what was the impact on mass transit, communications, and hospitals.

In California, both the Los Angeles area, as well as the San Francisco area, have been revising and revamping all of their emergency evacuation plans because they had this ability to go down and work with OFDA through the State Emergency Preparedness in the counties, which were wonderful, going down there and seeing first hand how does this really happen, and how do you respond, and how should we do it better.

I think the investment—and I just came back from Boulder, CO, talking with a number of people from California who are dealing with these——

Mr. FAZIO. That's as far east as we will go.

Ms. TAFT. It is very exciting to see them being able to factor into their program. Now, we should be out telling you this because it is so exemplary, I think, of the self-interest we have.

Mr. FAZIO. I think that is a great point, and I am glad you told me that, and it will help me sell the program even in another way other than what I have been trying in the past.

Ms. TAFT. I can give you a couple more examples that might help, too, and one is the vulcanologists who have been working on the volcano monitoring programs in Colombia and other places. They have told us time and again that what they have learned from studying Ruiz is helping immensely in the studying of Mount St. Helen's and looking at evacuation plans, looking at the monitoring equipment and how to interpret it.

Now this is stuff that is very exciting for the American people to understand. It is not just providing blankets and tents to some country that they have never seen and can't spell the name of. This is bringing it into direct relationship, and I think through—we are working on it, but we are not quite there, yet. We would love to be able to find out how in your terms, as the representatives of these people in the country, how do we translate what we are doing into things that make the American people not only say

it is wonderful to be humanitarian and responsive overseas, but it is going to help us, too.

Mr. FAZIO. That's great. That is very very useful, and I appreciate the sensitivity you show in trying to sell this in every possible way we can. I just hope you will sell it to Mr. Miller and the people over there who have been trying until yesterday when we stopped them to get our own domestic emergency preparedness programs through FEMA, but we think we have done that.

I appreciate seeing you here.

Ms. TAFT. Even our domestic programs have a lot to learn.

Mr. FAZIO. Absolutely. This is, in the long run, a way of cutting back on domestic expenditures. I appreciate your point.

Chairman LELAND. Aside from that, we spent well over $1 billion for African famine relief. If we had moved, if we had had a system in place, if we had had that task force working in 1983, as opposed to 1984, we probably could have saved untold hundreds of millions of dollars and thousand of lives.

Ms. TAFT. That could be.

Chairman LELAND. I am glad to see you doing what you are doing.

Ms. TAFT. Sir?

Chairman LELAND. I am glad to see you doing what you are doing—giving direction to OFDA, standing watch.

Ms. TAFT. Well, that's the best job in AID.

Chairman LELAND. I wish you had had that job in 1983. I think things might have turned around.

Ms. TAFT. I was spending my time in Africa on the refugee camp, so I see your side. I have been involved for a long time.

Chairman LELAND. You understand what I am referring to, then.

Ms. TAFT. I appreciate the chance to share with you some of the excitement and the relevance that we feel, and we have got a long way to go, but I think we are working on it, and would like to continue working with you particularly on the locust question, too.

Chairman LELAND. I am going to ask you and Mr. Love to meet with me at some point to discuss this further.

Ms. TAFT. Fine.

Chairman LELAND. I am going to dismiss you now because I know that Mr. Fazio has other commitments, and we do have one more witness. We might have some other questions that we would like to submit in writing to you, and we will keep the record open without objection, for any comments you might have as well as your responses to the questions.

Ms. TAFT. I appreciate the opportunity. Thank you.

Chairman LELAND. Thank you very much, Ms. Taft.

Our last witness today is Mr. Rondos. Alex Rondos serves as the emergency coordinator, Office of Policy and Planning, for Catholic Relief Services. CRS is, of course, one of the largest American PVO's active in development and humanitarian programs around the world. Additionally, CRS operates as a major emergency relief organization and was the largest American relief agency operating in Ethiopia during the famine crisis.

Mr. Rondos was an active participant in CRS's emergency programs in Ethiopia, and is overseeing efforts to upgrade the relief capability of the agency.

Mr. Rondos, the committee welcomes you. We look forward to your statement and your thoughts on ways to enhance the Disaster Assistance Program of the U.S. Government. Any thoughts you may have on how that program could be more supportive of agencies like your own active in the actual delivery of disaster aid, would be welcome. Thank you so much for being here.

STATEMENT OF ALEX RONDOS, EMERGENCY COORDINATOR, CATHOLIC RELIEF SERVICES

Mr. RONDOS. Thank you very much, Mr. Chairman and Congressmen. I am very grateful for the opportunity to discuss some of the lessons that we have learned in the last 3 years in our disaster responses, and also I should add that it is entirely fitting and appropriate that this discussion takes place before your committee, which is being so attentive to the needs of the many millions who remain so very vulnerable to starvation.

I do have a long statement which, if I may, I will submit to you.

Chairman LELAND. We appreciate your submitting the full text for the record. We look forward to your summary and also any comments.

Mr. RONDOS. Thank you.

For CRS, response to needs of disaster victims and helping to restore them to lives of greater security, dignity, and productivity is absolutely essential to our mission as an agency. Last year in 1985, 25 percent of all our resources available to us, and a large proportion of that came through the U.S. Government, of course, $125 million was committed to emergency programs.

In the previous 4 years we have spent an average of about $70 million. That is a considerable sum for a private agency, and while we can perhaps draw some satisfaction from our recent experience in emergency programming, we really feel very little temptation to complacency. We are struck by the fact that more people more vulnerable than ever to disasters, be they man-made or natural, and moreover, the causes of people's vulnerability to disaster have become so much more complex and difficult to deal with. It is the poor, be they the slum-dwellers of Mexico City, fishermen in the recent Solomon Islands emergency or, tragically paradoxical, the rural food producers of Africa, who are the least able to protect themselves against disaster and are most often confronted by the threat of disaster. They are the most tragic victims of underdevelopment, and it is their plight in the midst of disaster which most chillingly for us dramatizes the human toll with chronic underdevelopment exacts.

In light of our recent experiences and the considerable sense of urgency they have engendered, we have undertaken a very intensive review of our own emergency programming and have set about certain initiatives which are designed to streamline our own emergency management, sharpen our planning and very significantly to develop more systematic training of staff in emergency management, and I would be happy to discuss some of these issues if you would like to question me afterward, because I think they are applicable not just to us, but to other agencies and institutions.

Now, our actions are based on two fundamental conclusions we have reached from our recent experience. In the sense, they are conditions, we believe, prerequisites to future successful programming, emergency programming. The first is that there must be a far greater investment than there has been in planning and preparation for disasters. Second, there has to be a redefinition of what an emergency is, and therefore what a relief program is, so that it includes both preventive and rehabilitative measures, as well as purely survival programs, and I will touch on some of the implications in a moment.

Now, if these two conditions are met, and I think they are as relevant to a major donor like the U.S. Government as they are to private organizations like CRS. We would hope that, first of all, the management of emergencies would rise above the realm of the ad hoc which has so characterized major emergency responses recently, and it follows that this would entail, we hope, some critical improvement in response to disasters of gradual onset, which I think is the principal concern of this hearing that you have called.

We would prevent some disasters such as famine, and at the very least we could mitigate their worst effects. We can improve on the quality of personnel, logistics, communications, all of which constitute the bread and butter of a good emergency program. Finally, we would hope to be able to institutionalize the role of rehabilitation as an inherent, integral part of any emergency program.

Now, in addition, if we follow the initial conditions and act upon them, I think we would see a diminution in the institutional disruption that occurs for ongoing development programs when a sudden emergency takes place, and I think there is not an agency during the course of the last 2 years which has not seen itself absolutely have its insides torn inside out trying to manage the African disaster response while also being committed to a number of other areas of activity.

No less importantly I think we would all be able to make a far better case for comprehensive and coherent disaster responses on a more timely basis to donors who are too frequently, in our view, asked to contribute on the basis of anecdotal or sadly, sometimes, politically influenced interpretations of events.

I would like now to move briefly to some more practical suggestions concerning our creeping disasters. Whatever their cause, such disasters invariably end up as famines, and famines do not occur overnight. They are predictable. The consequences of a community's gradual restriction of access to food supplies, and being predictable, we believe they can be averted.

I think we should contrast the very distressing tardiness of response to Ethiopia's famine victims, and in saying that I am not simply talking about donor government, but everyone from governments in Africa to PVO's must share some of the blame in this affair. We should contrast the response to Ethiopia with the fact that in India, for example, over the last four decades, famine has been largely averted because there is a political and administrative system which is geared to move food or cash to needy localities at the first indication of risk.

Now, the example of India may not be completely translated, let's say, into the African setting; but I believe its relevance is tech-

nical. Some of the political lessons we learned from why the Indians can do this and have been able to do it tend to be ignored because we all rather take it for granted, and we forget that in fact what happens in India almost every year when there is a slight hitch in the arrival of the monsoons is an extremely well-coordinated, well-executed relief effort. The trouble is we don't just get to read about it in the press.

Now, from our point of view as external donors of emergency assistance, what we would like to emphasize is the still undeveloped potential for famine prevention and something which the report submitted to your committee deals with extensively. I think that this is, to a large extent, contingent upon the ability to develop rapid decisionmaking and also to develop some programmatic flexibility among major food donors, and I would like to emphasize here that creeping disasters in our view are effectively food emergencies, and it is impossible, speaking from the point of view of a private organization, for us to muster the resources in time to collect the amount of food that is usually needed to get it in time to the needy people without the support and encouragement and efficiency of a major donor like the U.S. Government.

Now, we have a couple of just very practical suggestions falling on reading the report that has been prepared for your committee. One is that we would suggest that an emergency prevention component be built into AID's regular annual development assistance plan for those reasons which are quite manifestly threatened by disasters of gradual onset. Such planning should ideally make provision for the rapid development of programs such as food or cash for work, some prepositioning of stocks or indeed the local purchase of food or other commodities that are needed, and obviously this is all, in turn, contingent upon the ability of act upon those warning signals which one hopes the capacity to follow them are being enhanced in the meantime.

Therefore, we would also hope that the very welcome initiative to, if you will, expand and strengthen the capabilities of OFDA will consider the need for a more permanent structure to coordinate and expedite decisions from the inevitable variety of government agencies that become involved in emergency programs.

When it comes to major disasters like in Ethiopia or Sudan, where for one reason or the other it has not been averted, I think there is one simple principle that should apply for everyone, and it is that minimizing the migration of people has to be the goal from which all sound relief planning must flow. In essence, food and other assistance must be moved to the people, and not the people to the food. To a certain extent, the astonishing thing in a place like Ethiopia was the degree to which that actually occurred, and that is phenomenal given the topographical and other constraints that have existed there.

But this does make for a much more complex relief program. It places great demands on logistics, accountability, communications, and it equally places high demands on the quality of staff.

Finally, of course, is the question of rehabilitation, which I have already referred to. Again, I just want to reiterate the point that if the aim of relief is to render those who are affected less vulnerable to recurrence of a disaster, then it is the obligation of any good

relief manager to plan from the earliest signs of a disaster for an extended rehabilitation effort which seeks to restore people's capability, as soon as possible, and then mount integrated longer term development assistance programs. This is something that emerges very strongly from our recent experience in Ethiopia where we clearly have had to integrate a quite astounding variety of interventions quite apart from just food.

Finally, I would like to make one brief comment, and again it is on the question of the politics of emergency work, and it is something to which reference is made in the report presented to you. To us it seems very logical that a creeping disaster—I think it has been referred to in your report—is one which has been allowed, and I would like to emphasize it is a disaster which has been allowed to occur, and the responses to which will be fraught with political obstacles.

In famines where civil strife is a major cause, we have seen that food relief can easily become the cannon fodder of those who seek to profit from humanitarian assistance. In such circumstances where it is not possible to prevent famine, we at the CRS find ourselves having to take a very single-minded view. It is the victims who are our prime focus, and our efforts will be directed at getting assistance to them regardless of the political climate and so long as we can possibly mount an operation that we consider to be professionally feasible.

Now, finally, of course, I would like to reiterate the point that Ms. Taft has already made, and that is that any society's need for external emergency assistance is really proportionate to that government's inability to provide the most fundamental security of all, which in the case of famine is protection from the ravages of hunger. So, perhaps the most significant contribution to set our discussion in perspective that we could all make, is really to rapidly try to improve the capacity for emergency responses of those countries which are particularly prone to these disasters of gradual onset.

[The prepared statement of Mr. Rondos appears at the conclusion of the hearing, see p. 88.]

Chairman LELAND. Thank you sincerely, Mr. Rondos. Let me now turn to the gentleman from California to see if he has any questions.

Mr. FAZIO. Thank you, Mr. Chairman. Mr. Rondos, you have heard Ms. Taft, and I know you are obviously concerned that we not repeat the errors of the past just as she indicated she is. You see in your observation of her agency, of AID generally, evidence that we are structuring ourselves to avoid these pitfalls again. Is there sufficient track record to have hope or optimism about the future.

Mr. RONDOS. Oh, yes. I suppose in the business I am in, I have to live with optimism, but, yes, there is. We have all come out of the last couple of years shaking our heads a bit and asking what it was that hit us. I think that some of the initiatives that seem to have been taken within AID are encouraging. There has been an attempt to improve, I understand, the capacity to develop early warning monitoring which is important.

I would also like to add that every disaster provides more experienced staff and personnel. Ultimately it is on-the-job training in this business, and I have always been struck by the wealth and knowledge, experience and expertise available within the U.S. Government. The question really is how quickly and capably can that be mustered to deal in a timely fashion.

What we had hoped for—and I really repeat again the point that I had made earlier—is that we feel the threat of disaster is really so monumental around the world, and we are going to be getting more and more involved in these disasters, that perhaps we ought to be asking ourselves whether all institutions, especially the U.S. Government, has the institutional capacity that has the measure of the problem out there. In our view, permanence of structure is a critical issue. You simply cannot afford to reinvent the wheel every time the TV decides to show the crisis.

This applies as much to OFDA and AID as it does to us in the private agencies and as it does to the U.S. system. We all created our task forces after the event. The issue is how can you have a permanent standing task force, and second, make it very clear to everyone who decides and how, a question I think anyone who is involved in emergency that is the critical issue: who decides. We have to streamline and rather remove what tends to be sort of a bureaucratic fruit salad and just cut it down to its absolute basic so that decisions are made very rapidly on the very well-informed basis.

Now, I am not sufficiently acquainted with AID's own structure to be able to give you a direct answer to that, but I hope my comments, in a sense, might set a standard which we have set for ourselves and we might hope would be replicated.

Mr. FAZIO. Do you think we are sufficiently prepared in areas around the world where we anticipate shortages and where those may grow into famines to have the infrastructure that we learned so disastrously is crucial to delivery of food, as you have indicated, and not people to where the food is? In other words, are we aware of places where transportation is inadequate, where railroads are not in repair, where trucks are not present? When I say "we," I guess I am talking about more than just the U.S. Government. I am talking about all the private voluntary organizations, the U.N., et cetera.

Is the machinery that grew up to deal with the African famine, thinking long term, are they looking at these crisis points that can bring all our best intentions to nil?

Mr. RONDOS. We know pretty clearly now in so many places what the problems are and what the likely pitfalls are going to be. I am somewhat more hesitant in saying that we have in turn consolidated are and about to make the best use of our lessons learned. There seems to be some debate as to whether the United Nations, the special office for Africa that it created, how long it is going to last, and when it finally, if it is to be broken up, what is going to happen to all that information, knowledge, and experience? Is it going to be just eaten up by the various other agencies that exist?

The same applies, again, to the U.S. Government. There is, if you will, objectively, academically speaking, yes, we know a hell of a lot more now than we did 3 years ago, and it is the type of informa-

tion, the technical information which I would hope can be turned into a form of systematic analysis presentation on a very regular basis regularly updated, so that we not only know what type of emergency is going to happen, but coming back to your very comment, we also know what it is that we ought to be supplying and when.

If I may just mention one or two brief experiences I had in Ethiopia where for over 6 months I attended endless donor meetings which were really in a sense a series of lengthy meetings which constituted afterthoughts. First of all, you decided to get the food. Then you realized that you didn't have sufficient warehouses. Then you realized that perhaps you needed more trucks. Now, all of this we can and technically, perhaps, should have known before. Obviously, emergencies by their definition have their unpredictable qualities, but I have seen some evidence that we are beginning all to learn the lessons.

It does boil down—I have to repeat Mrs. Taft's point, and it was obvious to everyone—it boils down to money. We have got to be able to invest in something that might happen. It won't definitely happen, but that might happen, and we don't know where, and that rather throws the ball back into your court, and it is often very difficult to make a case for more money for something that just might happen. But we do know that that threat is out there, and as I said, in our view, it is just monumental.

Mr. FAZIO. The first thing you would say is that money to preserve these structures would be the long-term investment that could be shown as our highest priority. Did you say that the U.N. is about to dismantle its structure?

Mr. RONDOS. Well, we have been hearing that, and this is something that I only picked up, and I haven't really updated myself in the last 2 weeks, but we within the PVO community in Europe and here have been a little concerned to hear that the mandates of the special office on Africa, I think, comes to an end in October, and the question we are all asking is, has the Secretary General at the very least made provision for his office to have some kind of coordinating function so that action can be taken in a centralized way as rapidly as possible.

I don't know where that issue stands at the moment, but I think it is something of rightful concern because the U.N. plays a critical coordinating role in so many of these emergencies.

Mr. FAZIO. I hope you will be conveying that to our U.N. representative through your associations and perhaps to the chairman and others who are concerned about our policy, and the United Nations could do the same.

Thank you, Mr. Chairman.

Chairman LELAND. Thank you, Congressman Fazio.

Mr. Rondos, I have a few questions I want to ask before we end this hearing. One is about the political considerations of the Ethiopian crisis and how difficult it was to operate in Ethiopia given the government there and the way that they are leaning. As I understand it, there were some very difficult times in the beginning in 1984 not only for the U.S. Government, but also for some of the private volunteer organizations. There were allegations of noncoopera-

tion on the use of the trucks that were there and some other problems.

Can you just comment on that?

Mr. RONDOS. Yes, certainly. The famine in Ethiopia can obviously not be disassociated from the fact that it is a country where there is civil strife over very extensive areas, especially those which were in 1984 and 1985 particularly badly hit by famine, and that is no coincidence, of course. Now, out of that obviously flowed all sorts of constraints.

The area of study and action on humanitarian assistance in the universe of civil conflict is still, in my view, an area of limited experience to which insufficient thought has been given, but to which more thought will have to be given in the future. Now, perhaps I can just give you a very simple example of the constraint that emerges.

For many months we heard that in Ethiopia countless trucks were needed—1,000, 2,000, I forget the numbers also to specifications. At the same time, none of us exactly knew how many trucks would be available to us from the Ethiopian Government, because at different times of the year it needed its trucks either for general economic activity carrying coffee or whatever to the port or for security if there is a campaign on, or whatever. Suddenly trucks would disappear. This leaves you in a very weird position because on the one hand you are appealing for thousands of trucks or whatever, and at the same time you know that a good portion of those are already in the country but being used for other purposes.

That is an inevitable constraint, a very difficult one to deal with, again, logistics being so important in the Ethiopian affair. Much of Ethiopia operates under a curfew, and the further north you go, where I spent a good deal of my time, from 7 o'clock at night until 6 in the morning there was a curfew. Things had to be off the road. That reduces the turnaround time of a truck by half. So if you needed 100 trucks normally, you needed 200 trucks to do your work.

These are some of the very practical considerations which we in a sense discovered as we were chugging along with the relief program, and we wished we had really, all of us who had the means, had done that homework before to know that. That's an example of some of the political—I don't know if I am addressing exactly some of your concerns, but that is a typical example of the political implications of a set of political circumstances that exist in a country.

In Ethiopia, moreover, certainly up until about November of 1984, before I got there, it is my understanding that it was really quite difficult to get permits to travel around the country very easily, which made it very difficult to collect the type of information that was needed and to fully assess the magnitude of needs and the type of needs.

Chairman LELAND. In how many countries does CRS operate in Africa?

Mr. RONDOS. Twenty countries.

Chairman LELAND. Twenty. Is Ethiopia the most difficult one to operate in?

Mr. RONDOS. Well, we don't operate in Zaire, so I can't compare with that.

Chairman LELAND. You can be thankful for that.

Mr. RONDOS. But it is difficult. Just naturally the terrain, as you, yourself, have seen is something staggering really as an obstacle to anyone who is trying to do something efficiently.

Let me make it clear that at the same time, for us who are practitioners, if you will, if you compare Sudan and Ethiopia, Ethiopia suffered, in a sense, from an excessive government. Sudan suffered from a vacuum of government, and someone who is running a relief program might rather an excessive government. At least I could deal with the Relief and Rehabilitation Commission, and those people knew their stuff and do know their stuff. They have a very impressive organization.

Chairman LELAND. Do they still? I mean Mr. Dawit is not there.

Mr. RONDOS. I hope so. I hope that it won't become an emasculated affair. It is a great example to the rest of Africa as a technical organization. So to us there were enormous benefits to having something like the Relief Rehabilitation Commission, and I would have dreaded the prospect of having to run a program in Sudan, and I take my hat off to those people who undertook that challenge.

Chairman LELAND. CRS was operating in the north. Are you in Tigre?

Mr. RONDOS. All over.

Chairman LELAND. All over.

Mr. RONDOS. We do have a special initiative up in Eritrea.

Chairman LELAND. Now, how difficult is that? How dangerous is that for the CRS workers?

Mr. RONDOS. Well, we have a program—if you can just indulge me for a moment and set the context a little bit. We do what is called dry ration feeding. In other words, a head of a family comes, picks up the food for the family for the month, and takes it away. We discovered in the midst of all the debate over safe passage or whatever in Ethiopia that the issue was becoming very frustrating.

In essence, we were all sitting on our hands or wringing our hands and saying how can we do something, and it really dawned on us that we were in fact already doing what could be done, and all we needed to do was to expand the locations and push them as near to the perimeter of security, and then attract people, tell them to come in, pick up their food and go away.

The key for us in the initiative that we took was to insist in negotiating with the Government of Ethiopia—and I must say here that AID has provided the food for this initiative. It has been entirely supportive, and very laudably so in this whole affair. What we had to insure was that the government from top to bottom, particularly the military authorities from the government side would guarantee that people coming in to collect food to take it away into areas not held by the government would not be molested. We could do this to a large extent because we are in the unusual position of acting through the Catholic Church in Ethiopia, which is run by Catholic priests, and they enjoy a measure of great confidence from all the various actors in Ethiopia.

I think this is a unique example, but it is, in a sense, an example of how one might try with some conservative imagination, if you will, to try to set up something in an area of considerable risk. I

think the International Red Cross found itself doing something really very similar. They at least are protected both by their own sign, which is very visible, and all sorts of international conventions. We have to tread a little more carefully in such matters.

Chairman LELAND. Very good. Mr. Rondos, there are some other questions which I may submit to you in writing. Since our time is so far spent, I think that we should conclude the hearing today. I really appreciate your participation not only here, but also your involvement in the famine relief effort in Africa and Ethiopia in particular, your work with CRS in general. You have been invaluable to us, and I appreciate it. I look forward to working with you in the future.

Mr. RONDOS. Thank you.

Chairman LELAND. Thank you very much.

[Whereupon, at 1:20 p.m., the hearing was adjourned subject to the call of the Chair.]

[Material submitted for inclusion in the record follows:]

Prepared Statement of Hon. Marge Roukema, a Representative in Congress From the State of New Jersey

MR. CHAIRMAN:

THE TRAGEDY OF AFRICA'S FAMINE HAS LEFT MANY LESSONS TO BE LEARNED BY AFRICAN GOVERNMENTS, BY THE INTERNATIONAL DONOR COMMUNITY AND BY PRIVATE VOLUNTARY ORGANIZATIONS. THE U.S. GOVERNMENT AND OTHER WESTERN NATIONS HAVE DONATED LARGE AMOUNTS OF FOOD AID, MEDICINE AND EMERGENCY SUPPLIES. THESE WERE NEEDED TO SAVE THE MILLIONS LEFT HOMELESS AND STARVING. WHAT HAS BECOME ABUNDANTLY CLEAR SINCE THE ONSET OF THIS TRAGEDY IS THAT THERE ARE MANY REASONS FOR THE DURATION AND SEVERITY OF THE AFRICAN FAMINE, AND THAT IT WILL TAKE MORE THAN FOOD AID TO KEEP SITUATIONS LIKE THIS ONE FROM RECURRING.

INADEQUATE LAND USE AND MISGUIDED AGRICULTURAL PRICING POLICIES LED TO A DECLINE IN AFRICA'S PER CAPITA FOOD PRODUCTION. DESERTIFICATION AND EROSION HAVE TAKEN ARABLE LAND OUT OF PRODUCTION. OVERGRAZING AND URBANIZATION HAVE CONTRIBUTED TO THE PROBLEM. MARGINAL LANDS IN THE SAHEL, ALREADY DEPLETED FROM A PROLONGED DROUGHT ARE PARTICULARLY VULNERABLE TO FURTHER DEGRADATION. UNLESS WE PAY CLOSER ATTENTION TO THE DECLINING STATE OF THE AFRICAN ENVIRONMENT AND CONCENTRATE ON REVERSING TRENDS SUCH AS DEFORESTATION, RECOVERY FOR MUCH OF AFRICA WILL STAY LABORIOUSLY SLOW AND CRISES SUCH AS THE RECENT FAMINE WILL REMAIN DIFFICULT TO PREVENT.

TODAY'S WITNESSES WILL GIVE US AN ASSESSMENT OF THE ENVIRONMENTAL AND ECOLOGICAL PROBLEMS NOW CONFRONTED BY REGIONS OF AFRICA AND OTHER PARTS OF THE WORLD. EFFECTIVE STRATEGIES TO PROTECT PRODUCTIVE LAND AND RESOURCES WILL BE A KEY PART OF OUR EFFORTS TO COMBAT POVERTY AND HUNGER IN LESS DEVELOPED COUNTRIES.

THE COMMITTEE WILL ALSO HEAR FROM THE DIRECTOR OF THE OFFICE OF FOREIGN DISASTER ASSISTANCE. THE U.S. GOVERNMENT'S ABILITY TO RESPOND IN A TIMELY AND APPROPRIATE FASHION TO NATURAL CATASTROPHES DEPENDS TO LARGE EXTENT ON THIS OFFICE. THE COMMITTEE IS INTERESTED IN HEARING OF OFDA'S VIEWS ON ENHANCING THEIR DISASTER PREPAREDNESS AND MITIGATION ACTIVITIES. THIS MAY WELL BE AN AREA WHERE SEED MONEY TODAY WILL GO A LONG IN PREVENTING HARDSHIP AND SUFFERING FOR A GREAT MANY TOMORROW.

Prepared Statement of Brian W. Walker, President, International Institute for Environment and Development

The International Institute for Environment and Development (IIED) is an International Non-Governmental Organisation (NGO) whose program is based on the use of science, scholarship and research into the interaction between development and the environment. Whilst offering a research capacity to bi-lateral and multi-lateral aid agencies for the generation of policy, the Institute is firmly grounded in practical field work. It works through a network of NGO`s and partner agencies primarily in the South, as well as its own staff. IIED`s global news and information service is Earthscan. The Institute operates in both hemispheres, but concentrates on the problems of sustainable development ie: wealth creation leading to sustainable livelihoods in the South. Key categories of research include agriculture and land use, forestry, energy, fisheries, marine, human settlements and NGO development.

A staff of 60 is centred on three main offices in Washington, London and Buenos Aires. The Institute was founded at the time of the 1972 Stockholm Conference on the Environment by Robert O Anderson of Atlantic Richfield and Barbara Ward, the British economist.

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1.00. Inevitably, any expert called to give evidence to your Committee will justify his/her arguments through the judicious use of statistical evidence. I shall be no exception. But my first point is to advise you to treat all statistics, and especially those which apply to the Southern hemisphere, with a measure of healthy caution. Some are relatively secure, such as land mass size, the distribution of range lands, forests and oceans, but when we turn to human populations, infant mortality, disease vectors, climate, food production, water distribution and so on - not least in respect of Africa - few of our figures have absolute reliability.

1.01 A new resource document researched and published by IIED in partnership with the World Resource Institute, in May of this year from which I shall draw a number of my references, and underlines this point. In a first ever presentation of data on the key sectors being studied by your committee, the lack of reliable data, country by country and represented in our presentation by an `x`, is obvious. Your commmittee might like to study this phenomenon as to what we do <u>not</u> know, with some care.

2.00. From now to the end of the century, our global environment will be under massive assault from its escalating human populations as never before in the history of this planet. No continent, from the polar ice caps to the equatorial forests, can escape the rapacious and destructive impact of the human species. Whilst we cannot and should not ignore the consequences of natural climatic change, it is governments and their people which destroy the environment and thereby threaten the survival of future generations. Those same human activities can and do affect the climatic equation. It is acts of man, not acts of God, which pose the fundamental threat to the human specie.

2.01. Our survival now is based not so much on <u>growth</u> as on <u>balance</u>. Balance between human populations and their natural environment. Crucially, is our symbiotic relationship with the planets biological systems, sustainable or not? Can human behaviour be made compatible with the eco-systems which support, sustain and protect us? That is an open question in my view. Bankruptcy in America`s farm industry and Europe`s gross over production are part of the same phenomenon as famine in the Third World. Currently some 90,000 people die daily

from malnutrition or famine; a further 30,000 from lack of water or from water borne diseases. Children under five years are the most vulnerable.

2.02. Last week at the AGM, in Finland, of the International Federation of Agricultural Journalists, the debate turned seriously on the question as to whether the whole of our global population could avoid endemic and universal starvation within the next 100 years. It is entirely possible that within a century all people will be starving - not just the teeming millions of Asia or Africa, but all of us. North America's strategic food reserves underpin global food security. Those reserves in post-war years have never exceeded 34 days supply. Effectively that is the gap which separates us from the "starving millions" of the Third World. Two bad successive harvests in North America, Europe and Russia would destabilize the world food system. Despite our apparent affluence we tread a narrow path between food security and starvation.

2.03. Why is this? Primarily, because our survival depends on a series of fragile and delicately balanced systems. Whilst it is true that nature has enormous resilience and massive reserves of strength, and that the human animal possesses great ingenuity reinforced by reserves of impressive creativity - and in those two elements lie our potential for survival - nonetheless, the web which supports us is finite and cannot endure indefinite assault. Consider the key strains we impose on our environment.

2.04. The human population has taken some 10 million years to grow. By the year 1800 it had reached one billion. It took only 130 years more to reach the second billion (1930), 30 years more to reach the third billion (1960) and 15 years the fourth billion (1975). From a growth rate of 2% per thousand years in prehistoric times, we are now growing at the rate of 2% per annum. By the year 2000, a world population of more than six billions will demand 50% - 60% improvement in food output over that of 1980. African populations lead these figures their growth is from a 1980 base of 470 millions, to 853 millions by the year 2000, and 1.5 billion by the year 2025. UN and World Bank projections anticipate that Africa, which now has some 10% of the world's population, will have 25% before global population changes now being put in place, can be effective. Africa is exploding at 3.01% per annum with Kenya in the lead having the world's highest fertility rate. Between 1980 and 2025 on her 1975 fertility rate Kenya's population will increase six times to 82.3 millions (FAO 1984). Fifty per cent of Kenya's population is under 15 years of age. Hard on Kenya's heels are a range of other African states. Governments around the world, on average survive and hence plan on a scale of five years - but population dynamics are measured in half centuries. The children are already living in Africa to ensure that continent's population growth well into the next century. It is increasingly important for democracies to think and plan in longer time scales than tenure of office predicate. Especially for Africa, we must plan strategically for four of five decades.

2.05. There is no life without water. Yet of the total water volume on this planet, 97% is sea water - as yet unfit for human use. Of the remaining 30% approximately 1% is frozen on the North Pole and 1% on the South Pole, leaving all living things, including the human specie, a survival thread of fresh water of 1% only. If we distinguish between ground water and soil moisture this diminishes further to 0.35% contained in lakes and swamps and less than 0.01% in rivers and streams. Fresh water is one of our most precious assets. We cannot live without it, yet we are polluting it, destroying it and wasting it on a prodigious scale. Without it we cannot irrigate our crops, nor water our livestock. Practically the whole of Africa is water deficient, with Saharan Africa chronically deficient.

2.06. There is evidence, and I would hold to the personal view, that in the African Sahel the climatic trend is in favour of drought and against rain. In conditions of 10, 15 and even 17 years without rain, drought becomes the norm and rain the aberration. The odds against these conditions being normal are now of the order of one in a million. In large parts of Ethiopia, the Sudan (a country which alone is one-third the size of the USA), Mauretania, Niger, Chad and Bukina Faso, food production policies should be based on drought as the reality, and not on "normal" rainfall. Fluctuations in the trend, such as occurred in 1985 when rain fell, should not persuade us in our part of the world that "the bad spell has broken". Such fluctuations as we had in 1974, and again in 1985, do not reverse the trend, they merely relieve the pressure for 12 months, provided seed, hoes and fertilizers are available and farmers - which for Africa principally means the women - are physically strong enough, despite the enforced malnutrition of the preceeding years, to till the land and tend their livestock. Globally, the "greenhouse" effect threatens to increase sea levels and change agricultural boundaries regardless of sovereignty.

2.07. Crops cannot be grown without soil, except by limited and highly specialist techniques. Yet top soil is being lost throughout the world at an incredible rate. The ground is disappearing literally from underneath our feet and yet, as the 1986 World Resource Report demonstrates, few governments have the slightest idea of the amount of soil they possess and for which they ought to be held accountable. Nor are they aware of the frightening daily loss rate, at which it is being depleted. Although all projections of world food supply and demand incorporate projections for croplands, none take into account the record amount of top soil being lost from the global cropland base through erosion. The annual loss is of the order of 25.4 billion tons of topsoil in excess of the new soil being formed and that loss is drastically reducing the inherent productivity of land. For a limited period of time developed nations can off-set this effect by the increased use of fertilizers, but in 14 Third World countries, mostly in Africa, soil loss is dramatically reducing land productivity. It is of the highest order of priority that we design strategies and implement policies, North and South alike, to arrest the erosion of top soil and at the same time take steps to restore its fertility. We ignore these imperatives at our peril.

2.08. Critical to soil loss, and interlinked with it, is the loss of tree cover and vegetation. Without the sponge like effect of forests and bio mass, soils either become waterlogged and saline, thus accelerating loss of productivity, or in drought conditions become eroded through the effect of wind and rain. This accelerates under the pressure of increasing livestock and/or human populations. The Karmoja desert in north east Uganda is a classic example. The combination of flooding, nutrient loss and eventual erosion are devastating. Brazil, the Philippines and Indonesia have seen the rapid conversion of their lands from dense and luxuriant jungle to virtually barren waste land. Nutrients recycled through the bio-mass on thin 4" to 6" soils, have been washed away. In South East Asia 25 million acres of forested land now carry useless saw grasses which provide neither food, fuel nor forage. Throughout large parts of Africa, Central America and the Indian sub-continent, the same environmental stresses are grotesquely apparent. When forests disappear, wood fuel energy also disappears for human populations. People turn first to bio mass and crop residues and then to animal dung for their essential fuel requirements. In so doing they deny their dwindling soil stocks the organic material essential to its fertility. An estimated 400 million tons of dung are burned annually in areas where fuel wood is scarce. This depresses grain production by over 14 million tons - an amount greater than the food aid provided annually to developing countries.

2.09. Forests cover about one-third of the world's surface land area. Range lands cover almost half of all ice free land. Again reliable data is difficult to come by. However, until the beginning of the nineteenth century, forests and woodlands covered some six billion hectares of land. By 1954 the total had declined to four billion hectares. This 30% reduction was caused by increased land use for agriculture, pasture and human settlements. About 25% of tropical and sub-tropical deciduous forests and wooded savannahs have been cleared. Reforestation is slowly ensuring the recovery of losses in the temperate forests of North America and Europe, but in Central America forest areas have declined from 115 million hectares to 71 million hectares, and in Africa from 901 million hectares to 690 million hectares, (1950 - 1983).

2.10. Deforestation, water depletion and soil erosion lead inevitably and relentlessly to desertification. Every desert in the world is thought to be expanding and each holds within its embrace the artefacts of civilizations which have collapsed, because of the way they abused the carrying systems of nature in their time. Our civilization cannot expect to be the exception. When we move out of balance with nature we destroy ourselves. Unless science and technology are deployed to secure balance instead of growth they will avail us nothing. By the end of the present century loss of land will result in the loss of half a million different genetic species, any one of which could be crucial to our future survival. For none do we have the right to deny access to our children.

2.11. The desperate picture I have been painting is far from complete. But the trend is clear. In the depletion of land, soil and water, in fisheries, energy, forestry and bio mass cover, in the pollution of air and water, the human specie is destabilizing our planet and threatening our own future. Increased populations exacerbate the trends; profligacy and sheer greed undermine our basic security; allocating limited resources to armaments and employing violence to resolve political disputes endanger our specie as never before in the global history of human kind

2.12. In Africa all these trends are at a crisis point. Although most of Africa in the Sixties was food sufficient the majority of African countries are now food deficient. Since 1970 overall major food production has declined by 14% (FAO). Food production is growing at only 1.8% per annum but population at 3.01% per annum; 20% of cereals are imported; between 1970 and 1980 imported food costs increased by 600%. We spent more in 1984 on importing arms into Africa than we spent in allowing food aid; during the last three years whilst US food aid to Africa increased by 40%, US military aid jumped by 150%. Food aid itself increased on average by 9.5% per annum throughout the seventies and armed conflict ensured a steady state of political instability within which long term stability cannot take root. Since 1945 Black Africa has endured 73 political coups and the assassination of 13 heads of state. No Sahelian government survived the mid-seventiesdrought. Environmental refugees flood across national boundaries making a mockery of the concept of sovereignty. Soil, water and forest losses are extreme; genetic diversity is destroyed in the process. Whole nations, like Mauretania which has now lost 70% of its land to the desert are likely to disappear entirely-taking with them their own indigenous ethnic uniqueness. During the past four years bread riots have taken place in countries as diverse as Morocco, Tunisia, Sudan, Ghana and Uganda. With one-tenth of the world's population Africa is generating 25% of the world's dispossessed - one in every 250 Africans is a refugee. The racist, apartheid policies of the Republic of South Africa add a moral obscenity to the strain we impose on natures carrying systems in that Continent. In a word, as President Nyrere advised when he assumed the chair of the OAU twenty years ago: "Africa is a mess."

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2.13. Other major parts of the world continue to have their problems. Although India is self sufficient now in food, she still has a major problem in distribution and the capacity to feed her own people during periods of drought. Beyond this, poverty in India continues to cripple many village communities, although all Indians are better off than 20 years ago. Bangladesh remains a "bread basket" and has an escalating population. For that country the loss of forests on the Nepalese and other Himalayan foot-hill states, seriously leads to flooding, siltation and soil losses. Vietnam, Cambodia and Laos remain amongst the poorest of nations with armed conflict heightening the suffering of people, together with environmental degradation. In South America the Andean region is declining ecologically with a direct impact on food production. The same is true in Central America where political stability cannot be secured if the biological carrying systems collapse as is possible.

3.00 What are the key points in planning a strategy to change this bleak scenario? I would include the following:

i) Poverty is the principal challenge in the Southern Hemisphere. Poverty is therefore the greatest pollutor of all.

ii) All phenomena are interconnected. We strike a balance with our environment or we do not survive. Yet our academic disciplines do not reflect this insight.

iii) We cannot take more out of the soil than we put into it without courting disaster. By removing tree, shrub and biomass cover we accelerate desertification and ensure the rapid loss of irreplaceable soils. Dust bowls and deserts follow implaccably. Governments fall, people starve.

iv) The human population is exploding beyond the resources of nature and we cannot stabilize that situation before the first quarter of the next century.

v) More than half the nations of sub-saharan Africa are food deficient.

vi) The combination of war and environmental degradation leads to political instability, the antithesis of investment requirements. They ensure population movements which exacerbate instability, enforced as in Ethiopia, and voluntary as in Central America.

vii) Corrupt political leadership at many different levels, and inexperienced or inept bureaucracies, compound the problems. Mozambique is a classic example.

viii) The dominant, high energy, hi-tech, agricultural model developed in North America and Europe and with its reliance on monoculture, does not offer the way forward for the majority of Third World countries although it has a role to play when balanced with other more appropriate labor intensive techniques.

ix) As long as the North continues to take more out of Africa than it puts in in terms of trade balances Africans cannot escape from the poverty trap. Africa`s continuing debt crisis ensures no long term recovery is possible. Yet in areas designated `famine` areas, merchants continue to be able to buy and sell grain whilst the rest of the world pours in food aid. In the mid-seventies drought in Ethiopia, merchants in Addis Ababa bought and sold from local resources over 750,000 tons of grain, whilst the donor governments exported to Ethiopia some 1.25 million tons of grain. This year much the same has been occurring in the Sudan in Africa and in Bangladesh in Asia. So WHAT exactly is a famine? Meanwhile, over 80,000 expatriate aid workers throughout Africa, at an overhead cost of $100,000 per person per year, absorb in excess of $8 billions of aid. Is this the best use of aid funds?

x) Why has there been virtually no "green revolution" in Africa? What contribution can agricultural research make to resolving Africa's dilemma, and what style should be adapted to make it effective?

4.00. Other points and questions come to mind, but before answering some of these questions I want to stress that the problems confronting us are soluble. We have the skill, the science, the technology and the wealth. What we seem to lack is the political will to act, and the cultural sensitivity to act effectively.

4.01. Nor is Africa full of gloom and doom. There are many, highly successful development programs in Africa. Later this year IIED will publish an analysis of these, based upon careful field research by Paul Harrison. From Zimbabwes USAID supported population planning program to the use of soil stabilization techniques and alley cropping in Nigeria; from Oxfams's water harvesting program in Burkina Faso, to tree planting by CARE in Niger; from the use of more efficient wood fuel stoves, to soil conservation programs in Kenya; from the AFSC's womens urban gardening program in Guinea-Bissau, to the successful cultivation of 24 different varieties of rice in Tanzania - Africans are perfectly capable of returning to self sufficiency in food production and know better than we do how to husband their natural resource base so as to generate sustainable livelihoods.

5.00 So what makes for success? Despite massive diversity in the South, I would stress the following:

i) Population planning programs must work from inside the prevailing culture. In Africa the extended family, ancestor worship and the belief that children are given by God and are an expression of divine approval, are dominant factors. The random distribution of pills and contraceptive devices is irrelevant and insulting. Men still dominate many local cultures in Africa and family planning programs therefore must target men as well as women. Because of the strength of polygamy, single working girls in urban centres should also be a focus. Schools, colleges and universities which offer an openness not available elsewhere in the third world should be another target, as should key opinion formers and field educators. Social anthropologists should be employed automatically in Northern-funded family planning programs. Such programs should be integral to general development programs and not free standing.

ii) Whilst the major bi-lateral and multi-lateral aid programs should aim to improve the infra-structure at the macro-economic level and yet be environmentally as well as economically sustainable, increased aid should flow to small scale, labor intensive, appropriate programs at village level with concentration on the provision of basic needs within a style which incorporate three dimension:

a) The involvement of people themselves in designing, developing, planning, directing and controlling the program so as to enhance self reliance.

b) The use of local resources on a sustainable basis. The use of environmental impact audits as a standard tool.

c) The development of a pricing structure and distribution system for any surpluses generated, in favor of the small scale rural producer. Hitherto the aim has been to preserve the political stability of urban elites through the provision of cheap food and cheap fuel energy, at the expense of the rural producers. That is one reason for the failure of African food prodution.

iii) Agricultural research should be culture specific - concentrating on what people living in the vicinity of the research station actually want and then replicating success on an ever widening scale; concentrating on applying the green-revolution to traditional food crops so as to be sustainable.

iv) Extension services should use local languages and propogate new and successful techniques including water harvesting through micro-catchment technology, intercropping, alley cropping with 30 - 40% increase in yields, the use of nitrogen fixing plants, drought resistant seed and pest/disease control through biological symbiosis. Above all research needs to be made sustainable and appropriate to local needs. Recently, in one financial year, research into the staple food maize, attracted only a derisory 23 million dollars, whilst coffee attracted 39 million dollars. Reforestation schemes should use indigenous tree species rather than the ubiquitous eucalyptus with its high root run.

v) Research needs to be undertaken into the improvement of soil fertility and the best way of tackling endemic parasites like striga.

vi) The rapidly improved, and successful soil conservation techniques of Java, Nepal Kenya and those now emerging as terracing programs in the highlands of Ethiopia, need longterm underwriting and replicating.

vii) Wherever possible "aid" should latch on to traditional wisdom and inherited knowledge especially that passed down from mother to daughter. As the recently retired chairman of the World Bank wrote earlier this year, "there is no more powerful force for progress against poverty than the initiative and ingenuity of poor people themselves".

6.00 Finally, in the North, we must put greater resources into developing renewable technologies and develop interdisciplinary approaches to problem solving. In the South the prime need is for political and environmental stability within which food to eat can be grown, reforestation assumes a priority and, in Africa in particular, populations are stabilized and ultimately reduced. Aid programs must generate sustainable livelihoods and that means emphasis on <u>quality</u> and <u>effectiveness</u> rather than volume of aid flows.

PREPARED STATEMENT OF THOMAS B. STOEL, JR., DIRECTOR, INTERNATIONAL PROGRAM, NATURAL RESOURCES DEFENSE COUNCIL

I. Introduction

Mr. Chairman, I appreciate very much the opportunity to testify before this Committee concerning the relationship between environmental conditions in Africa and the problem of hunger, and the actions which are needed. You are to be commended for holding this important hearing.

I am Thomas B. Stoel, Jr., Director of the International Program at the Natural Resources Defense Council (NRDC). NRDC is an environmental organization with more than 60,000 members in every state and more than 30 foreign countries. Today I am also testifying on behalf of four other major environmental organizations: the National Wildlife Federation, which has more than 4,500,000 members and supporters; the National Audubon Society and the Sierra Club, each of which has more than 500,000 members; and the Environmental Policy Institute.

All of these groups have a strong interest in the health of the environment, not only in the United States but all over the world. They recognize that in the poor countries of the developing world, we cannot have a sound environment unless we meet basic human needs. They are deeply concerned about the tragic and growing crisis in Africa.

II. Natural Resources and the African Crisis

As this Committee well knows, Africa recently emerged from the worst of a famine which caused the deaths of many thousands of people and forced millions to leave their homes and wander in search of food. The United States provided hundreds of millions of dollars worth of food aid to prevent further starvation.

Despite the compelling nature of this tragedy, it is crucial to recognize that Africa's crisis is a long-term one, not caused just by a freakish drought and not to be solved by food aid alone. We must remember, for example, that in the early 1970s, Africa went through a famine which was equally devastating. The newspaper headlines of 1972-73 were eerily reminiscent of those in 1984-85. We must act now to ensure that those headlines to not reappear in the 1990s.

In particular, the problem of hunger in Africa is due in large part to degradation of the natural resource base under the

pressure of rapidly growing populations. That degradation must be reversed if Africa is to enjoy a decent future.

A. Population Growth

Human populations in Africa are increasing at explosive rates. The United Nations estimates that Africa's population, now about 550 million, will reach 1.5 billion by the year 2025, only 40 years from now. Some nations, such as Kenya, are growing at a rate of 4% per year, meaning that the entire population will double in less than 18 years. It is estimated that before levelling off Kenya's population will grow from 20 million to 111 million, Ethiopia's from about 42 million to 204 million, Nigeria's from about 96 million to 528 million, and so on. In 1983, the Economic Commission for Africa stated that "the historical [population] trend scenario is almost a nightmare."

These population trends have great significance for the fight against hunger. It is well known that per capita food production in Africa has declined over the past decade. But we should not glide over the words "per capita." Explosive population growth not only means that a given amount of food must be parcelled out among more hungry people. It also means that growing numbers of farmers are placing increased stress on Africa's fragile natural resource base.

B. Natural Resources and Environment

The reason why the environment and natural resources are so important to Africa's future is that Africa's population is still predominantly rural, and most Africans depend on nearby natural resources for the great majority of their daily needs. Food mainly is of local origin, and depends on water, productive soils, and wild species of plants and animals. Most people obtain water from neighboring rivers, streams, or wells. About 90% depend on fuelwood, animal dung, or crop residues for heating and cooking. Trees and shrubs provide materials for shelter.

The essence of the problem in Africa is that growing numbers of people live on arid lands where these resources are difficult to produce at best. Adverse climatic conditions -- which unfortunately may persist over the long term -- have caused production of these resources to fall short of the needs of the present population. One result was the famine.

If food output is to increase, the natural resource base must become more productive. Yet the degradation is accelerating. Perhaps the most troublesome trend -- and one intimately related to food production -- is loss of soil productivity. Precise figures for the African continent as a whole are hard to come by, but it is known that little arable land remains uncultivated; that on sloping fields, soil erosion

of 20-40 tons per acre is common; that as fuelwood becomes scarce, cow dung and crop residues are increasingly used for fuel rather than to renew the soil; that livestock numbers have nearly doubled since 1950, and in many areas livestock herds exceed the land's carrying capacity by 50-100%. In addition, drought and erosion are affecting water supplies. Wells dry up; rivers and streams that ran year-round are choked by silt and no longer furnish water in the dry season.

Tree cover enhances water supplies, favorable microclimates, and the ability of soils to resist erosion. Yet in Africa the area cleared of forests each year exceeds by 29 to 1 the area where trees are deliberately replanted. In famine-stricken Sudan, the stock of trees has declined by 25% since 1965; current trends will reduce the stock to one-fourth of the original level by the year 2000.

Another African resource under threat is wild species of plants and animals. Many species are in danger of extinction due to hunting, gathering, or habitat destruction. These wild species provide necessities of life for many Africans, in the form of "bushmeat," traditional medicines, and so on. They also constitute a genetic reservoir which is needed to improve and invigorate Africa's food crops and to meet the needs of people everywhere.

III. Needed Actions

A. Introduction

Mr. Chairman, in this part of my testimony, I will describe the actions we believe are necessary to maintain and restore the natural resource base in Africa, especially those by the United States. We would begin by emphasizing several fundamental principles:

First, the problems can be solved. Africa has enough natural resources to feed even an increased population. We must not give in to despair. After all, the food situation in India was widely predicted to be hopeless 20 years ago.

Second, the problems are long-term, and so must be the solutions. This may seem evident, but many people seem to believe that we must have quick solutions or none. On the contrary, we must be willing to make long-term commitments and wait patiently for the results.

Third, the solutions must be designed and administered by Africans. Food aid obviously is a temporary remedy. Other kinds of foreign assistance can help, but they must aim to equip Africans to deal with their own problems.

Fourth, the solutions must be suited to African conditions. One reason why some efforts by foreigners have been part of the problem rather than the solution is that they were designed to fit social and physical conditions in other places.

A. Actions To Protect and Restore Natural Resources

The productivity of African agriculture depends on a sound natural resource base. The trends of desertification and deforestation must be reversed if long-term food needs are to be met.

Environmental and social conditions in Africa -- including the weaknesses of national governments, the lack of transport and communications systems, the need for careful management of fragile soils and water supplies, and the existence of strong institutions at the village level -- make it clear that these efforts must come mainly from the bottom up, not the top down. The most important efforts actions must take place at the local level, with strong national support.

The U.S. Office of Technology Assessment recognized this in its excellent December 1984 paper, "Africa Tomorrow." That report records an emerging consensus that "the technology most needed in sub-Saharan Africa should be low-risk, resource-conserving, small-scale, affordable (not capital intensive), locally produced and repaired, adapted to local labor availability, and consistent with traditional agricultural methods." It is essential that future U.S. policies toward Africa aim to foster these kinds of local actions, together with supporting actions at the national and regional levels.

The corollary is that, generally speaking, we believe there is little need in African agriculture for large-scale, mechanized approaches or for more large dams or irrigation schemes. Careful assessment of proposals for large projects of this kind usually will demonstrate that development goals -- including satisfaction of short-term human needs; maintenance of the resource base to meet longer-term needs; and achievement of economic goals -- can be better accomplished through small-scale, decentralized efforts.

Local Level

At the local level, what is needed is a multitude of small-scale, local efforts to increase food production in ways which protect and restore the natural resource base. These efforts should feature agroforestry and mixed agriculture, small-scale farms and gardens, village-level rangeland management efforts, and other innovative agricultural methods (including energy- and resource-conservation techniques, and use of low-input, organic, or regenerative methods where feasible); check dams and terraces

and other erosion-control projects; tree planting for windbreaks, soil stabilization, or firewood; energy conservation and small-scale energy production to reduce consumption of firewood and animal wastes otherwise usable as fertilizer; and local family planning, health, education, and training efforts.

These projects can only succeed when local people are involved at all stages of project design and management. There must be greater involvement of African women, who usually are the ones who actually labor in the fields. Commonly, the best way to involve local people will be through local governmental organizations, such as village councils; through local nongovernmental organizations; or through U.S. private and voluntary organizations. A constant theme among aid agency personnel and others who have spent time on the ground in Africa is that projects administered by these types of organizations are most likely to succeed. African development must build on this field experience, so that these projects are not isolated examples but the norm.

We would emphasize especially the role which must be played by indigenous African groups. Village institutions in Africa are relatively strong. They must be involved in the planning and implementation of projects, and in their administration. Village people must be educated, trained, and otherwise prepared to carry on after external assistance comes to an end. The growing number of national and provincial indigenous nongovernmental organizations can help make this happen, as can international nongovernmental organizations like the Nairobi-based Environment Liaison Centre, the International Union for Conservation of Nature, and the World Wildlife Fund.

U.S. leadership is required if these actions are to occur on the right scale. U.S. AID has been doing some of the right things, but not nearly enough of them. In a time of tight budgets, there is an urgent need to reorient the U.S. bilateral aid program to emphasize these kinds of local efforts and supporting actions at the national level. This can be done by enacting H.R. 2782, sponsored by Rep. Benjamin Gilman and others.

The United States also should use systematically its influence with the relevant multilateral development banks (MDBs) -- the World Bank and African Development Bank -- to ensure that they adopt the same priorities. The MDBs must develop new ways of working with local people and organizations, and must adopt procedures for project approval which ensure that environmental impacts are assessed and environmentally beneficial alternatives examined.

National Level

Purely local actions will not be sufficient to maintain and restore the natural resource base. The local projects just described must be backed up by efforts at the national level to establish or strengthen soil conservation, agricultural extension, and forestry services; provide seeds, seedlings, energy-efficient and resource-conserving devices, and other needed materials; train and educate local people; and create financial mechanisms to furnish credit to small farmers. National programs and actions also are required to conserve Africa's plant and animal species.

The program of U.S. AID should be reoriented in these directions through enactment of H.R. 2782 and legislation similar to H.R. 4908, the bill introduced by Rep. Schneider and others which directs AID to do more natural resources and environmental training in Africa; and passage by the Senate of companion bills to H.R. 2957 and 2958, measures passed by the House in June which direct AID to put more emphasis on conservation of plant and animal species and their habitats. The United States should influence the MDBs to follow the same priorities.

Among the major obstacles to increased agricultural production in Africa are national economic policies -- price controls, taxes, and so on -- which discourage farmers from maximizing production. The United States should influence and assist African governments to make needed reforms.

Regional Level

Efforts also are needed at the regional level to stimulate needed research, address regional problems like the debt crisis, and support effective institutions which operate regionally.

Planning and Coordination

The Congress should ensure that the U.S. Government plans and coordinates its own actions on a regional basis. It is shocking that even now there appears to be no overall U.S. plan for responding to the long-term crisis in Africa. Without such a plan, our country cannot identify priorities, make long-term commitments, and coordinate with African institutions and other donors.

The Congress should require that this planning process examine all the means by which the United States can bring about needed changes in Africa. The Congress and Executive Branch should look at ESF funds, PL 480 efforts, the Peace Corps, and other U.S. instruments, and make sure all U.S. resources and leverage are employed to best effect. They should assess carefully the mix between ESF and economic assistance funding for Africa. We believe this assessment will show that our real

security needs would be better served by a higher proportion of economic assistance.

Some actions by donor nations and African governments should be coordinated at the regional level. In particular, workable mechanisms should be established to share information about unmet needs, successful projects, appropriate technologies, and so on. The OECD's Development Assistance Committee, the Permanent Interstate Committee for Drought Control in the Sahel, and the Club du Sahel can help. However, there may be a need for a new mechanism to coordinate and stimulate long-term assistance. The UN Office of Emergency Operations for Africa is performing this function very capably with respect to emergency relief and rehabilitation, and might be a good model.

Multilateral Organizations

The Congress should make sure that the U.S. uses its influence with international organizations to ensure that they contribute to the goals set forth above. Accordingly, the United States should support the efforts of the UN Environment Program to address environmental problems in Africa, as part of an overall U.S. contribution to UNEP totalling at least $10 million per year. In addition, the International Fund for Agricultural Development and the African Development Foundation both appear to be useful mechanisms for encouraging the kind of local initiatives described above.

The records of the MDBs and the UN's Food and Agriculture Organization are quite different. The MDBs too often have supported misguided, environmentally damaging, top-down development. The FAO has promoted livestock development with disastrous effects on fragile grasslands, and has supported indiscriminate use of potent, long-lasting pesticides on unique and fragile ecosystems. Therefore, we believe that the United States should decline to provide increased funding to these institutions for on-the-ground rural development in Africa until they implement major reforms which put them in line with the goals stated above. The United States should use all its influence to bring this about.

The Debt Crisis

In exploring the causes of Africa's environmental decline, environmentalists have found it necessary to consider economic issues, including the debt crisis which currently afflicts the continent. The poor countries of sub-Saharan Africa are saddled with an unmanageable burden of debt. There is increasing recognition that these nations cannot afford to service these debts and at the same time make the investments needed to put them on the path to sustainable development. Crucial investments in maintaining and restoring the natural resource base,

small-scale agriculture, and other areas will not be possible if nations are continually preoccupied with staving off the next call from creditors and foreign assistance is aimed largely at "rolling over" old debts.

Accordingly, we propose that the United States, in consultation with other creditor nations, move immediately to provide to poor countries in sub-Saharan Africa -- those with a per capita GNP of less than $750 -- relief from official bilateral debts. So far as possible, the provisions of Section 124 of the Foreign Assistance Act should be employed to place equal amounts in local-currency accounts devoted to the kinds of local, small-scale projects recommended above. Consideration also should be given to relieving these poor countries of official multilateral debts.

Such an initiative would result in forgiveness of official debts owed by all but a handful of the black sub-Saharan nations. This would be of great benefit, since a large proportion of the debt owed by these nations is official. This step should be acceptable to the United States and other creditor governments, for these debts are unlikely to be repaid. Indeed, Canada recently announced a similar action -- a fifteen-year debt moratorium -- and other nations previously have moved in this direction. The United States is bringing up the rear, and it's time for us to catch up.

If debt is forgiven, it is essential to ensure that the mistakes of the past are not repeated. The redirection of U.S. aid which we recommend -- with emphasis on sustainable, small-scale, community-based development which maintains the natural resource base while meeting human needs -- will help to ensure that African nations and foreign donors do not make more costly bad investments.

Research

We are not experts on research. However, it appears that in general the agricultural research establishment represented in the Consultative Group for International Agricultural Research hasn't really come to grips with Africa. There is talk about a "Green Revolution" for Africa. But the essence of the Asian Green Revolution was the development and dissemination of new, higher-producing crop strains which increased productivity on fertile soils, in part through application of expensive, high-energy inputs by highly disciplined farmers.

Africa largely lacks the fertile soils. Productivity of arid Africa's grains of preference, sorghum and millet, has nearly stood still. Research on African crops is needed, especially to develop major food crops which can be grown on an environmentally sound and sustainable basis in semi-arid areas.

But if there is an African Green Revolution, it will look very different from the Asian one.

Short of major food crops, there is an urgent need for research to provide appropriate materials and techniques for local projects of the kinds described previously. The need here is for practical, least-cost technologies which may be overlooked by conventional research institutions. For example, the promising areas of agroforestry, mixed farming, and low-input agriculture are presently starved for funds.

There is also a strong need for better monitoring and data on environment and natural resource conditions. Remote sensing, aerial surveys, and ground investigations all are needed on a scale far beyond the efforts of the past. These findings must then be incorporated into development planning.

The United States should use its resources and influence to promote these kinds of research. We should place great emphasis on involving and strengthening African research institutions.

. Actions To Stabilize Population Growth

A fundamental priority must be to stabilize population growth in Africa. Agricultural development cannot be sustained unless human populations stabilize at levels where natural resource systems can provide the food and other products required. The current, explosive rate of population growth in Africa is clearly unsustainable.

Many African governments at last are recognizing the need for strong actions to slow population growth. They need advice and help. The United States should meet this need through U.S. AID and by contributing generously to the UN Fund for Population Activities. The goal should be to establish in each African nation a major and effective program of family planning assistance. It is essential to utilize fully the capabilities of nongovernmental organizations, such as the International Planned Parenthood Federation. The relevant efforts of UNICEF also deserve support.

IV. Why Should We Care?

I have just described actions which some of the Nation's major environmental organizations believe should be taken to solve the natural resource crisis in Africa. I hope I have convinced you that these actions are feasible, that they would make a difference, and that the United States can help make them happen.

But there is a fundamental underlying question: Why should the United States care about the fate of Africa, its natural

resources, its people? For the groups which I represent -- and I suspect for almost all members of this Committee -- the answer is "yes." But the question is very real. In a time of fiscal stringency, many are asking whether we can afford to help people on a far-off continent. It currently appears that development assistance to Africa may absorb a disproportionate share of Gramm-Rudman budget cuts.

The most compelling reason why the United States should respond to the African crisis is simply that the American people care about the African people and are moved by their suffering. This was dramatically demonstrated by the outpouring of concern for the victims of the famine, which led the United States to furnish huge amounts in emergency food aid, an effort which is continuing.

There are economic reasons as well. We have seen that this famine is not a one-time event but part of a long-term crisis. The demands for U.S. emergency aid inevitably will rise if we address only the symptoms of this crisis and not its causes. Strictly in dollar terms, we will save money by investing in the long-term measures needed to ensure a sustainable future rather than pouring out billions in emergency aid.

We have other economic interests. By the year 2025, 1.5 billion people are likely to live in Africa, almost 20% of the planet's population. If these people are prospering, they will provide markets for American goods and supply products which we need. If they are on the edge of catastrophe, or have gone over the brink, they will be a massive burden.

We also have national security interests in Africa, as shown by recent events in Somalia, Ethiopia, Angola, Chad, and other countries. We rely on strategic minerals from Zaire, Zambia, Gabon, and other African nations. We will be more secure if Africa is prosperous and stable than if it is gripped by famine and unrest.

For environmentalists there is another reason to care. We are acutely aware that there is "only one earth," and that all the continents are tied together by complex economic and ecological links. All of us share the oceans, the atmosphere, and the climate which depends on them. We are already threatened by problems like stratospheric ozone depletion and carbon dioxide buildup, the solutions to which will require cooperation by people in all parts of the world. If we take any but the shortest view of the human future, it is insane to believe that we can wall ourselves off from a continent which occupies 20% of the earth's land area and soon will contain an equal share of its people.

Caring enough to help is essential but not sufficient. If we are to sustain the long-term commitment which is required, the U.S. public must be convinced that every foreign assistance dollar is well spent and is making a difference. That is why the policy changes we recommend are so urgently needed. If these changes are made, the United States can help Africans overcome their crisis and feed themselves. The alternative -- continued human suffering and famine -- cannot be allowed to happen.

Prepared Statement of Alexander R. Love, Deputy Assistant Administrator for Africa, U.S. Agency for International Development

Mr. Chairman and Members of the Committee:

Thank you for the opportunity to discuss the Agency for International Development's (A.I.D.) view of the present and future impact of environmental degradation and ecological decline on food security in Africa, and to describe A.I.D.'s strategies and programs to counter the massive environmental problems being faced in the Region.

The problems are complex and with multiple dimensions - food, natural resources, demographic pressures, and agricultural technology and productivity - intricately woven together. In general, the past crop year has been a good one in sub-Saharan Africa owing to policies more favorable to producers, increased use of improved technologies and better climatic circumstances. The weather is in sharp contrast to 1984-85 when the continent was gripped by one of the most severe droughts in history. Rainfall was well below average in nearly every country, some countries were experiencing consecutive years of drought, and roughly half of Africa's 475 million people were at risk. The U.S. Government's response was massive, more than 5 million metric tons of food assistance valued at over one billion dollars flowed into Africa - constituting nearly one-half of the overall emergency food relief provided by the donor community as a whole.

While it is virtually certain that continued U.S. humanitarian assistance will, in the years to come, help to mitigate the burden of unpredictable and recurring droughts, we must also assess and address the long-term issue of sustainable rural development in sub-Saharan Africa. A key factor in the issue is environmental degradation. This degradation, involving deforestation, soil erosion and fertility losses, and desertification, has substantially contributed to increasing the Region's vulnerability to drought, and at the same time, undermining sustainable agricultural productivity.

Environmental degradation is a manifestation of two fundamental problems: low per capita food availability and high population growth rates. The misuse and overuse of the land by people and their livestock driven by exponential demographic pressures has fueled the present destructive patterns. Over the past two decades, per capita food production has declined by about 20 percent in sub-Saharan Africa. With population growth increasing by more than 3 percent in most countries, the demand for food has far outpaced production. The continual pressure on soil and water resources is intensifying beyond natural carrying capacity in large areas. Much of the limited achievements in increasing agricultural production has come from the expansion of farming onto lands too marginal to sustain production for more than a few years without significant additional agricultural inputs rarely available to these farmers. The land clearing involved, combined with extensive fuelwood gathering, has driven the deforestation rate to new historical dimensions. Rangeland degradation in the Region is also severe, particularly in the Sudano-Sahelian zone where prolonged drought exacerbates the deterioration. Loss of woody vegetation followed by destruction of perennial and then annual grasses from overgrazing and drought leads inexorably to desertification.

The low and decreasing agricultural productivity in sub-Saharan Africa, and the resultant downward trend in food supplies is an outcome of the above trends. This situation, however, is also

the result of external factors which have severely impeded agricultural development. Principal among these factors is stifled private initiative caused by inappropriate government policies and overextended and ineffective government bureaucracies. For example, prices to farmers have often been kept artificially low to satisfy the politically important urban consumers' demand for cheap food. Overvalued exchange rates have also made nominal farmgate prices much lower in real terms. Inefficient state marketing monopolies have been slow to collect the crop or pay the farmer. Inputs have not been available when and where needed at reasonable prices. At the farm level, producers feeling the the pressure for land, and virtually without extension services, have chosen inappropriate land-use practices, e.g. shortened fallow periods and extensive rather than intensive cultivation and animal husbandry techniques. Added to all of this are traditional land tenure systems and government land and tree tenure policies which discourage conservation and private investment. These constraints add measurably to the self-sustaining and worsening spiral of environmental degradation. Only by first making agriculture a productive and remunerative activity, can we then expect farmers to improve the stewardship of their basic resource - the land.

Nevertheless, in spite of the problems, the outlook for food security on a continent-wide basis is better than individual country potentials, especially in the Sahel, might suggest. Admittedly food production in sub-Saharan Africa has grown at a very low rate (1.8% a year on average over the past decade). Still in years of good rainfall the continent achieves near self-sufficiency in the aggregate. The 1985-86 bumper harvests estimated at about 54 million metric tons of food grain illustrate the point when compared to estimated total demand of about 57 million metric tons for this year. Countries like Sudan, Zimbabwe and Kenya are expected to produce surpluses totalling about 2.7 million metric tons compared to deficits of 2 million metric tons last year. Even the Sahelian countries which regularly register food deficits are showing some local surpluses this year.

Meeting the growing demand for food implies a growth in agricultural productivity of 4 percent a year. Achieving and sustaining this rate of growth will likely be very difficult and require substantial investments in agriculture to make the most of physical potential, and in programs to arrest population growth and reverse environmental destruction. Because this is a multi-faceted problem the response also needs to be wide ranging.

Of prime importance is support to agricultural research to enable the development of better and more suitable technologies for a larger percentage of African farmers. With appropriate technologies, farmers will be able to obtain higher yields thus limiting the pressures for extensive agricultural practices. Some progress is being made including a better sorghum variety being used in the Sudan and combined crop/tree systems for West Africa being developed by the International Institute of Tropical Agriculture as a stable alternative to shifting cultivation. As part of the technology package, improved land use and cultivation practices which feature low input agriculture and soil and water conservation are also being encouraged. A.I.D. is heavily involved in the development of new technologies for small farmers via agricultural research projects in over 20 African countries. Support is also provided to a number of regional research activities, such as the Sorghum/Millet program in Southern Africa, as well as to the International Agricultural Research Centers active in Africa. Food crops are the focus of the research in which A.I.D. is investing $60-90 million annually. A.I.D. is also supporting efforts to reduce the costs and increase the

efficiency of African irrigated farming systems. While not large in total area, these systems provide some degree of food security. The recently developed A.I.D. Plan for Supporting Agricultural Research and Faculties of Agriculture in Africa is our basic strategy document in this area and reflects, importantly, the recognition of the need for a sustained, long-term effort.

Another major thrust is improved economic policies which impact on agricultural production and natural resource use. Statements by African delegates at the recent U.N. General Assembly Special Session on Africa were supportive of new efforts to improve the policy framework. Many countries have taken steps to economic adjustments, often with our assistance. For example, Senegal, Zambia, Ghana and Guinea have adopted comprehensive macro-economic reforms. Through decontrol or higher producer prices, Kenya, Malawi, Somalia and Niger have recorded increases in corn and sorghum production of between 40 and 200 percent. We have supported programs to reduce subsidies and increase private distribution and farmer use of inputs in Kenya, Niger, Malawi and Cameroon. We continue to support changes such as: realistic exchange rates; higher prices paid to farmers; reducing inefficient state-run enterprises; and, stimulating foreign trade. Investments to increase the supply of food and other agricultural commodities wil not be effective without accompanying improvements in access to local and regional markets and responsive demand patterns. Strengthening agricultural links to other sectors of the economy and to urban markets is critical to accelerating the income and employment multipliers so essential to sustained growth.

Africa's marketing and transportation networks, if expanded and maintained, could stimulate production and make food distribution and trade easier, more affordable, and more reliable. A.I.D. has worked to improve transportation facilities throughout Africa in an effort to reduce hunger by providing access (road and water) to potentially rich agricultural regions which are presently inaccessible throughout much of the year. These transport improvements have taken the form of improved farm to market, or feeder roads, such as the Western Sudan Market Roads, rehabilitated or new regional arterial roads such as those being planned for Southern Africa, rehabilitated rail lines, and new river and seaport facilities. We recognize this is a complex area, and as a first step, are analyzing the present situation and formulating possible strategies which will be reviewed with other donors and African countries. PL-480, Food for Progress, and local currency support for private business will be used to encourage this process. At the same time we will need to use our food aid very judiciously to avoid undermining development of local and intra-regional markets for domestic production. We will also explore ways to help promote small and medium scale industry in support of agriculture, economic diversification and off-farm employment.

Those of us among the development community concerned with Africa, have increasingly recognized that much of what we are doing to enhance food security and reverse environmental degradation is simply holding the line until real progress can be made in dealing with the population problems. At present, most African governments are at a crossroads in terms of recognizing the negative impact that rapid population growth has on their development, their environments and their quality of life. The governments of a majority of African countries with the largest populations now recognize the direct relationship of growing populations putting increased pressure on marginal land. In May of 1986, representatives of 36 African Governments met in Harare, Zimbabwe and agreed to work within their parliamentary networks and constituencies to increase support to the provision of family planning services.

Most significantly, the Governments of Nigeria and Zambia are expected to promulgate population policies this year. These two nations comprise over 27 percent of the total populace of sub-Saharan Africa and their desire to develop action plans for nationwide delivery of family planning information and services could lead to a significant reduction in growth rates in the next several years. A.I.D. provides population assistance to countries of sub-Saharan Africa which represent some 70 percent of the total population. While usage rates of modern family planning are now low in most African nations, many of these governments are only beginning to establish service delivery networks. Experience in other countries of the developing world indicates that there is usually a large percentage of couples who will take advantage of the availability of reliable family planning information and services once these are established.

The momentum towards more governments establishing population policies began in Kilimanjaro in January of 1984 when 24 African Governments agreed that couples and individuals have the basic right to decide freely and responsibly the number and spacing of their children and to have the information, education and means to do so. Most recently, at the Special Session of the United Nations General Assembly on Africa, an action plan was developed to address their own development problems with the consensus that they, the Africans, must take the leadership and put the major amount of resources into this effort.

Over the past four years, the number of A.I.D. population bilateral programs has increased from three to a projected thirteen by the end of this fiscal year. In Fiscal Year 1981, A.I.D. provided about $4.5 million for population activities in Africa. This fiscal year, almost $80 million will be obligated. Although the U.S. is not the only donor increasing its support for family planning in Africa, we remain the largest. We are working with other donors to achieve synergistic results by closer coordination at both the central and country levels.

I am well aware that this Committee, and indeed the Congress itself, witness the number of new legislative proposals, is specifically concerned with the relationship between environmental stability, food security and long-term development in Africa. I must reiterate, however, our conviction at A.I.D. of the importance of understanding the environmental crisis of Africa in the context of the larger set of forces which drive it - particularly those related to food production and population. I would now like to take a few more moments of your time to specifically address our view of and program for environment and natural resources for Africa.

United States interest in combatting environmental degradation in Africa dates to the late sixties/early seventies when we launched rather large rehabilitation programs as a result of the devastating drought that afflicted the Sahelian Region during that period. Like many other donor programs our program keyed on reforestation efforts as the spearhead of the fight. A.I.D. currently has approximately $60 million obligated for forestry projects and another $80 million in closely related natural resources and renewable energy projects in sub-Saharan Africa. Approximately $125 million of PL-480 resources have been earmarked for reforestation efforts in the Region within that same timeframe. With a program of this magnitude, the U.S. has been the largest bilateral donor addressing African environmental problems and exercised a certain leadership role. For example, the U.S. chairs the Cooperation for Development in Africa (CDA) Forestry/Fuelwood Technical Committee which brings together, on a regular basis,

representatives of all the major (11) donors with forestry/natural resources programs in Africa to exchange experiences and concert our actions.

Many of the early forestry efforts, both our own and those of other donors, were less successful than anticipated and as a result we have been carefully analyzing our programs for the last few years. In the past, cause and effect vis-a-vis environmental degradation and desertification have been too closely and simplistically ascribed to the so-called fuelwood crisis. While there is indeed a great need for fuelwood, in areas undergoing environmental degradation many components of the rural production system are often also under stress. As a result, we have actively moved towards greater integration of our agriculture and forestry programs and staff. At the same time, we have affirmatively promoted tree planting at least cost and with greatest scale and spread, namely on the farms and farming lands of Africa. Ongoing projects where community-based agroforestry and tree-planting activities are beginning to make modest progress can be found in Senegal, The Gambia, Rwanda, Burundi, Kenya, Somalia, Sudan and Comoros.

Attention must be devoted to building on peasant subsistence farming systems to increase their resilience during poor rainfall years. Similarly it is evident that good fertile soils will be necesary to exploit the full potential of the increased supply of genetically enhanced varieties of food crops. African agriculture is hostage to a number of major constraints which trees can help ameliorate. These circumstances are part of the desertification problem but also come into play on lands that for the moment are more or less intact. Rainfall is highly variable and growing seasons can be as short as two months. Frequently large portions, as much as 40 to 60% of what rainfall does occur, are lost to runoff because of inadequate infiltration. Topsoils are unstable and subject to erosion from rain and wind. Nutrients are scarce, especially the major ones - nitrogen, phosphorus and potassium,. When nutrients are lost to harvesting, leaching and runoff, soil fertility rapidly declines as do food crop yields. Natural restoration of fertility through fallow may take up to twenty years. Annual crops can take up half the readily available nitrogren in a single harvest. Organic matter is easily lost under high soil temperatures thereby undermining the cation exchange capacity and accelerating nutrient leaching. Finally, growing populations compete for static amounts of food, fodder, fiber and fuel.

In contrast to these difficult constraints are the positive agroforestry effects of trees and shrubs in supporting agriculture. Where trees and shrubs are present, either bordering, sheltering or scattered within fields and grazing lands, these effects can have substantial impact. Rainfall runoff can be considerably reduced, conserving water and soils. Trees and their roots can have a binding effect and enhance soil porosity thereby increasing infiltration of rain. Windspeed and temperatures can be diminished at ground level improving microclimate on the fields. Soil nutrients are converted and recycled, particularly by leguminous trees. Nitrogen is captured from the air, fixed in the soil, retrieved through roots and redeposited as leaf litter. Crop yields through these effects can be stabilized and in some cases even increased. Food and fodder reserves are available between harvests and during drought. Trees usually survive periods of little rainfall drawing on groundwater stored beneath the soil. Farm trees can be a significant source of fuelwood. The role of trees and forests, at the macro-level for overall environmental stability, and at the field level for their effect on field moisture, soil nutrient status, and crop yield, is probably the most tried and accessible technology available

in Africa today to combat environmental degradation and desertification.

Planting trees in farmers' fields, in agroforestry configurations or as small woodlots, fence-rows, around the homestead or wherever they may fit, as well as maintaining and managing forests and woodlands for sustained multiple-use, can be the key to environmental stability in Africa. This, however, means more than having foresters espouse and promote agroforestry. It means in effect, a policy and programs that recognize the importance of tree and forest cover for agricultural productivity and which translate into a meaningful administrative, legislative and institutional framework capable of promoting and delivering this approach to the farmers. It will necessarily be a long-term proposition. The time to start, however, is now; the outcome should be a multi-disciplinary extension approach which seeks to service the opportunities and needs of the peasants rather than three separate extension services (agriculture, livestock and forestry) which compete for the attention and resources of the farmers.

Training and education for host country nationals is a fundamental feature of such a program. Over the last 5-7 years, A.I.D. has spent an annual average of approximately $6.5 million on forestry, environment, natural resources and closely-related agriculture training programs in Africa. This sum includes the annual expenditure of approximately $0.3 million thorough centrally and regionally funded natural resources training projects; about $2.7 million for bilaterally funded forestry and natural resources training activities; and about $3.5 million for training in related technical areas, such as range management, soil science, and water management. We anticipate continued attention the vital of human resources development in support of institutional building in the sector.

More work on basic studies and research to assemble and amplify the effect of what is already known about the benefit of tree planting on crop production from a farming system viewpoint will be necessary. More importantly, however, will be continuing the policy review already underway in some African governments about the integration of agriculture and forestry, extending and accelerating it where possible. A dynamic, practical process of policy dialogue among government ministries concerned, and between Africa governments and their donor partners, is necessary to address the issues of policy reform and institutional changes required to proceed with a practical integration exercise. An important policy benchmark along the way to greater integration of agriculture and forestry will be a resolution of problematic land and tree tenure issues. Too often farmers are dissuaded from planting trees on their land because of doubts about their future rights to those trees.

Farm forestry in Africa combined with the economic opportunity of a cash market place for fuelwood holds bright promise for meaningful impact on both productive and protective initiatives required to contain and reverse environmental degradation. It should be emphasized that these actions are recommended as part of, rather than substitutions for, the wide range of essential soil and water conservation and crop improvement measures urgently needed to help increase food production in semi-arid Africa. Expanded national efforts in soil conservation engineering (terracing, bunding and contour plowing, etc.), no-tillage techniques and research to shorten crop cycles will all be needed if we are to build-in greater resilience against drought in African farming systems.

These measures cannot overcome the consequences of excessive drought or high population pressures. However, if systematically pursued they can increase the areas of sustainable agriculture and buy time for the full spectrum of

longer-term economic development efforts needed for individual and national growth. A.I.D. has already incorporated this improved analytical understanding of the problem of environmental degradation into action programs. Recently we authorized a new cooperative agreement with the International Council on Research in Agroforestry in Nairobi, Kenya to set up a regional agroforestry research network in East Africa. We are also planning a similar research endeavor for West Africa designed to gather quantitative data on the impact of selected tree-planting activities on cereal crop yields. This is a result of the impressive gains achieved in the CARE/A.I.D. Majjia Valley Windbreak Project in Niger. CARE with support from A.I.D. and cooperation from the Government of Niger has successfully established over 500 kms. of windbreaks which have been responsible for net increases in millet yields of over 20 percent.

Like this CARE project, we have also been actively promoting community-based tree planting activities with the private voluntary organizations. At present approximately one-quarter of the A.I.D. forestry-natural resources portfolio in Africa is being implemented by these groups, with an excellent success record. We will be holding a workshop co-sponsored by Interaction in September to discuss the lessons learned and potential future cooperation with PVO's becoming possible as a result of the supplemental PL-480, Title II allocation. In addition to these PL-480 funded programs which often also involve Peace Corps Volunteers, we are also increasingly turning to the PVO community to carry out the forestry and natural resources projects being funded bilaterally with Development Assistance monies by our field missions. New project starts in Senegal, Mali, Somalia and Sudan, involving private voluntary organizations are presently being finalized.

Beyond project assistance two larger efforts are underway and expected to help us to more effectively address the long-term issues of environmental degradation in Africa. The Famine Early Warning Systems (FEWS) Project to start in FY 87, will help establish national capability to provide planners and decision-makers with timely and credible information and early warning of potential nutritional emergencies. Based on a combination of satellite remote sensing capability and ground truthing it will also provide increasingly accurate assessments and information on natural resources conditions. Secondly, at the direction of the Administrator, an intra-Agency working group is putting together a Plan for Supporting Natural Resources Management in Africa to guide the Agency, its bureaus and missions in the choice of programs and projects to deal with these problems over the long-term. The Plan is currently in draft and will be reviewed again with outside experts next month and with our field missions prior to being put in final form.

We believe our current programs are on the mark. Environmental needs are being addressed both in a broader context and with specific environmental-related projects. Unfortunately, there are not enough resources to do everything that needs to be done. Although the broader investments we have identified are germane and critical, we are faced with a problem from the reduced size of our budget. We have had to postpone projects and cancel others. In this time of diminishing resources, earmarking is not the answer because it does not give us the opportunity to balance our program needs and objectives.

Africa is turning the corner in many areas to which A.I.D. has directed its attention and support in recent years. It is significant that our program emphases have been met with such achievements as the adoption of pragmatic population programs, macro-economic policy adjustments which have improved the

conditions for agriculture and overall economic development, and critical agricultural research undertakings. We are justly proud of these modest results but more importantly we have found it heartening and stimulating to find our African counterparts, at many levels, gainfully engaged in making good progress towards their own national goals. These results on many fronts will, we believe, strengthen the overall impact of our assistance to halt the environmental degradation on the continent.

New opportunities are arising for the Africans themselves to make greater strides in development. However, these favorable circumstances are appearing at a time when we are more ill-equipped to respond than we were in the past. We have had to carefully analyze and choose assistance investment options while at the same time foregoing some valuable opportunities to help the Africans make a difference in getting on a sustainable course that will arrest ecological decline while improving the prospects for food security and family planning.

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Prepared Statement of Julia V. Taft, Director, Office of U.S. Foreign Disaster Assistance, U.S. Agency for International Development

Mr. Chairman and Members of the Select Committee.

I am very pleased to appear here today to testify before this Committee concerning the enhancing of the effectiveness of the U.S. Government's foreign disaster assistance program, of which I have been Director since January of this year.

The Select Committee's ongoing concern over the recent Africa famine crisis and its aftermath, especially as it relates to improving the development process and the enhancement of the international disaster assistance program, is laudable. I share your enthusiasm toward making the U.S. Government's international disaster assistance program better by leveraging our limited resources, both human and monetary, to help an ever

increasing number of potential vulnerable disaster victims in the future. Without doubt, much has been accomplished, as your recent report on the U. S. Government's foreign disaster assistance program so aptly describes.

Mr. Chairman, last year was a time of unprecedented human tragedy resulting from natural and man-made disasters. Devastating earthquakes in Chile and Mexico, cyclones in Bangladesh and Fiji, a volcanic eruption in Colombia and many other sudden disasters to which the Agency's Office of Foreign Disaster Assistance (OFDA) provided relief claimed thousands of lives throughout the world. At the same time, as you know, millions of people were threatened by the "creeping disaster" of drought and famine conditions which ravaged sub-Saharan Africa.

We must not lose sight of the fact that response to disaster impacts, whether caused by sudden events or by "creeping" or slow onset conditions are principally the responsibility of affected host governments and secondarily the humanitarian concern of both the multilateral and bilateral donor community. We must also recognize, in the aftermath of the African famine, that the deepening development crisis overtaking sub-Saharan Africa is an African problem of potentially immeasurable proportions caused by many factors including population, farm pricing, increasing debt, insecurity and war. Population vulnerability to the impacts of drought, famine and locust infestations may ultimately be surpassed by 1) the severe impacts of declining economic productivity, especially in agriculture, 2) an incapacity of Africa to feed itself even with favorable crop conditions, and 3) continued implementation of misguided national economic policies. The Africa crisis we have all dealt with, and continue to address, has root causes well beyond our relative ability to monitor potential food shortages and provide rapid logistical support to mitigate famine conditions for short intervals of time. Clearly, disaster assistance can now be perceived as an integral part of development as it can be used most effectively to buffer the adverse impacts of deleterious events on fundamental progress in development, as well as the saving of lives and the reduction of human suffering.

In the twenty-one-year history of the Office of U.S. Foreign Disaster Assistance (OFDA), never has the collective magnitude of disasters been so great nor the level of appropriated funds been as substantial to ensure effective U.S. response. Yet in spite of the extraordinary demands which were placed on the OFDA staff, I am

pleased to report that the Office not only met the challenges with diligence and competence but also learned many valuable lessons which has led to improvements in our operational effectiveness.

In several of my past positions, I have had the opportunity to observe OFDA's work at first hand. I was frankly amazed, however, when I had to come to grips with the breadth and depth of the responsibilities which rest with the Office. Our greatest challenge is to turn our focus to those areas in which we can be assured of the greatest impact while ensuring that the U.S. Government's international disaster assistance program is as responsive as possible to the needs of disaster-threatened populations throughout the world.

Some of the disasters to which we have responded in 1985 and 1986 are indicative of the changing patterns of international disaster assistance which should be of interest to this Committee.

One of the patterns is the increased ability of some disaster-prone nations to respond effectively to their own disaster requirements. The Chile earthquake relief effort of March, 1985, was an excellent example of how host country national organizations which have emphasized disaster preparedness can effectively coordinate massive relief efforts with minimal outside assistance. The fact that only 177 people died in the earthquake - which shocked urban areas - also is a testimony in part to the value of quality engineering design based on sound assessment of disaster threat. It is encouraging that the Chilean authorities, along with our own National Science Foundation, OFDA and others, are actively following new initiatives to find better ways to protect populations from the earthquake threat in Chile.

In May, 1985, an estimated 10,000 people died in Bangladesh from a devastationg cyclone and storm surge. To put that tragic toll in perspective, however, we must remember that a storm of comparable strength killed at least 300,000 people in the same area in 1970. The difference in 1985 was, in large part, determined by the cyclone alert system installed by the National Oceanic and Atmospheric Administration and the National Aeronautics and Space Administration in 1982 which was funded by OFDA. This technology, which generated early warnings via satellite and greatly improved communications networks, is credited with the saving of several thousand lives.

In Bangladesh as in other developing countries there has also been a significant awareness of, and commitment to, disaster preparedness over the past several years. This commitment has paid off, as demonstrated by the fact that the Government of Bangladesh proved itself capable of responding to the needs of the stricken population with only limited financial support provided by the donor community. The need for such financial support is indicative of the high correlation between economic stability and self-sufficiency in the face of disaster.

The Mexico earthquake of September, 1985, was the most severe natural disaster in the Western Hemisphere since the Guatemala earthquake of 1976. It was the first time the Mexican Government had accepted large-scale assistance from the United States in several years. It was the first time OFDA officially deployed search and rescue teams. It triggered the largest U.S. public and private assessment and coordination capability yet fielded by OFDA. And it was the first major disaster to occur since OFDA's immersion in the African famine relief program. The sum of these "firsts" has prompted intense internal reviews of OFDA's operating procedures and resources, and these have already resulted in improved OFDA operational effectiveness and efficiency.

The common disaster theme throughout 1985 was the famine in Africa. At the time it was happening, the relief effort appeared slow. In retrospect, however, it seems incredible that so much assistance has been provided in a targeted and coordinated way and so many people have received a new lease on life, literally, in slightly more than one year since enactment by the Congress of the supplemental funding legislation for the African drought victims.

As massive as the relief effort has been, we are aware that many drought-related problems still exist in Africa. OFDA will continue its close monitoring of the situation in conjunction with the A.I.D. Bureau for Africa and will respond should life-threatening events require our intervention.

I would agree with the Committee's basic finding in its recent policy analysis and review that the U.S. Government found it necessary to expedite aid to the victims of the Africa famine through the creation of new infrastructure, but I believe that this has had a beneficial result and positive impact on the future of Africa development. The famine we all witnessed was an extraordinary event requiring extraordinary measures, to which this Administration was fully committed. We have significantly expanded the potential reach of development assistance through the vehicle of new relief assistance infrastructure both on the ground and through the voluntary agencies' organizational structures. Today, the U.S. Government is but one donor in a field of many. The African famine catastrophe as well as Africa's recovering efforts are truly world concerns for which there are no simple solutions.

Through the years of its existence OFDA has assisted disaster-prone countries to protect their populations from disasters and to provide relief and rehabilitation when disasters inevitably occur. Built in large part on faith and logical assumptions, we believe OFDA's programs have had a truly positive effect on reducing the risk of disaster-threatened populations.

Mr. Chairman, at this time, I would like to address a number of the Committee' conclusions and recommendations contained in the Committee's report of July 1986.

We believe that the level of funding for the disaster assistance program is adequate and that the established mechanisms available in current legislation to augment the International Disaster Assistance account are adequate. Our borrowing authority, as legislated by Congress, in addition to special appropriations by Congress in crises of major proportions with global implications, such as the Africa famine has proven adequate for this purpose . This is as it should be. In times of enormous need, we want to work with the Congress to discuss fully our objectives and needs. These needs must be addressed jointly in a partnership of the legislative and executive branches of government. Our disaster relief response, on a case by case basis, is necessarily driven by a continuing assessment of unmet needs. This must be done within the context of the total relief effort within the donor community as well as a host government's ability and political willingness to receive our humanitarian assistance.

I would suggest that the percentage of the annual disaster assistance appropriation since 1979 which has been allocated for disaster preparedness, early warning, mitigation and training has been quite sufficent. In the past seven years, this non-relief program activity has achieved significant results and has transferred many techniques to counterparts in the developing countries. These include such diverse activities as improved earthquake monitoring networks in Peru, El Salvador, Costa Rica, the Dominican Republic, and Panama as well as volcano hazards mapping and warning systems in Mexico, the Philippines, Colombia, Papua New Guinea and Ecuador.

Some of the more technical work we have sponsored in early warning systems has stimulated great improvements in the state of the art of disaster forecasting for drought, storms, tsunamis and seismic activity. We have progressed to the point where we can now concentrate on applying proven scientific and technological capabilities directly to the needs of the population at risk. We believe improved host country disaster preparedness and management programs should be a primary focus for future OFDA preparedness programs. At the same time, we shall find new ways to encourage other elements of the U.S. Government which have broad technical ability (e.g., National Oceanic and Atmospheric Administration, National Aeronautics and Space Administration, U.S. Geological Survey) and the private sector to pursue scientific and technological areas of mutual interest.

We believe that the current risk assessment methodology related to creeping drought and famine disasters which we have put into place is capable of triggering appropriate mobilization and mitigation efforts by the U.S. Government today if it were necessary to do so. A.I.D. currently has two systems capable of analyzing weather impacts and the socio-economic conditions, health and demographics required to identify populations at highest risk to famine. Timely famine early warning system (FEWS) reports are now being provided routinely to a wide variety of users both here and in Africa, including donors, host governments, and public and private agencies. As recently as last week, representatives from A.I.D.'s Food for Peace Office, Bureau for Africa, and OFDA met with the United Nations Food and Agriculture Office (FAO) to coordinate U.S. Goverment efforts in early warning with those of other international organizations and other donors.

The current funding level under the International Disaster Assistance account, together with OFDA's ability to borrow up to $50 million against other Agency accounts, has enabled us to meet disaster needs under all but the most pressing circumstances. In times of extraordinary requirements, the Congress has always been forthcoming with supplemental or special funding.

In fiscal Year 1986, $21.5 million was appropriated for the International Disaster Assistance (IDA) account. As of this date, we have a sufficient balance to meet basic disaster relief needs for the remainder of FY 1986. We have requested an appropriation of $25 million in FY 1987, which will allow us to pursue our objectives in preparedness, early warning and mitigation, as well as emergency relief, to the fullest extent feasible.

As mentioned earlier, contingency funds are available through our borrowing authority. The process by which monies are transferred, when deemed appropriate and necessary, to the IDA account requires a careful reevaluation of Agency priorities and ensures the best use of already appropriated funds. We are often able to utilize deobligated funds for emergency purposes and are consistently supported throughout the Agency when emergencies occur which require such funds.

We have tried to maintain our preparedness and mitigation activities at approximately thirty percent of our total expenditures. Twenty-eight percent of our FY 1987 budget is allocated for these activities.

Funding is not the only constraint on our expansion of these programs. Staff resources are limited, as are the opportunities to make significant contributions in target countries. Therefore, we feel that our current balance of activities is correct and in fact is consistent with the recommendation contained in the Committee's report. We also feel our efforts are consistent with the capacity of host countries to absorb and effectively utilize our project assistance.

The causes of disasters can only be reversed if they become a primary concern of development planners. The best preparedness efforts in Africa are sound development programs. One of the best institutional results of the Africa famine response has been the strengthening of ties among OFDA, the Food for Peace Office and the Bureau for Africa as we collectively deal with these issues. The Foreign Assistance Act provides the Agency ample mandate for disaster preparedness and mitigation through selected development activities (Section 106) as well as disaster assistance (Sections 491 and 492). What is needed, in my opinion, is the means to provide incentives for carrying out the intent of that legislation. We need, collectively, to find new ways to convince development planners in the donor community and in developing countries that the viability of populations threatened by disasters must be a high priority. As the Committee report points out, "disasters are problems of development." I would hope that this Committee would assist us in persuasively carrying this message to donors and aid recipients alike.

The Agency is very actively pursuing risk assessments, particularly in the area of predictable future African food shortages. It is encouraging to me that the Agency has adopted and expanded upon the drought monitoring program OFDA has developed within the National Oceanic and Atmospheric Administration (NOAA) since 1979. We are confident that the precursors of drought induce famine, as well as some other types of natural disasters, can be detected at an early enough stage that effective action can preclude disaster, at least in drought situations. I am concerned, however, that the perception of threat may diminish if we see continuing favorable conditions in Africa over an extended period. I believe also that we need to better define the processes required for mobilizing effective action with particular attention to the often severe political implications which large-scale food shortages pose.

OFDA must never underestimate its primary responsibility, which is to provide immediate, effective and efficient disaster relief to the victims of natural and man-made disaster. At the same time, I am struck by the fact that only rarely do we have the opportunity to save lives after a disaster strikes. Thus, we cannot ignore those preparedness, early warning and mitigation activities which enable host countries themselves to respond effectively to the needs of their own populations at risk. This Administration is strongly committed to maintaining the integrity of our humanitarian programs. Be assured that I shall do whatever I need to do to ensure that the humanitarian purposes of our legislation are implemented. I look forward to working with the Congress in this effort and to your continued support.

Mr. Chairman, I am extremely pleased to be the new Director of the Office of U.S. Foreign Disaster Assistance and cannot imagine another office within the foreign affairs community which offers greater satisfaction in terms of meeting humanitarian needs.

Prepared Statement of Alex Rondos, Catholic Relief Services

Mr Chairman, distinguished members of the Committee, I am grateful for this opportunity to discuss some of the lessons learned by Catholic Relief Services from our disaster responses over the past three years. It is entirely appropriate that this discussion take place before the House Select Committee on Hunger, which has been so attentive to the needs of the many millions of people who remain so very vulnerable to starvation.

Responding to the needs of disaster victims and helping to restore them to lives of greater security, dignity and productivity are central to the mission of Catholic Relief Services. Last year, over 25% of resources available to CRS - $125 million - were committed to emergency responses. In the previous four years our emergency programs averaged some $70 million annually.

While we can perhaps draw some satisfaction from our recent emergency programs, we feel little temptation to complacency. More people are more vulnerable to disasters -- natural or man-made -- than ever before. Moreover, the cuases of peoples' vulnerability to disaster have become much more complex and difficult to deal with.

It is the poor -- be they slum dwellers in Mexico City, fishermen in the Solomon Islands or rural farmers in Africa -- who are most often confronted by the threat of disaster and who are the least able to protect themselves against it. They are the most tragic victims of underdevelopment, and it is their plight, in the midst of disaster, which most chillingly dramatises the human toll that chronic underdevelopment exacts.

In light of our recent experience, we at Catholic Relief Services have intensively reviewed our emergency programs and have undertaken a variety of initiatives designed to streamline emergency management, sharpen planning and develop systematic training for staff. I would be happy to discuss these measures in more detail in response to questions.

Our actions are based on two conclusions we have reached concerning emergency responses. First, there must be greater investment in the planning and preparation for disasters. Second, there must be a redefinition of emergency relief to include both preventive and rehabilitative measures as well as survival programs.

If these two conditions are met -- and we believe they are as relevant to major donor like the United States Government as they are to private voluntary organisations - we can hope that the management of emergencies will rise above the realm of the ad hoc. It follows that this would entail some critical improvement in our response to disasters of gradual onset. We may prevent some disasters, such as famine, that are triggered by drought and we can certainly mitigate their worst effects. We can improve the quality of personnel, logistics and communications -- the bread and butter of disaster management. We may finally institutionalize the role of rehabilitation as an inherent and integral part of any emergency program. In addition, we may diminish the institutional disruption of ongoing development efforts which is so often caused by insufficiently planned and co-ordinated emergency responses. And, no less importantly, we will be able to make a better case for comprehensive disaster response to donors who are frequently asked to contribute on the basis of anecdotal or politically influenced interpretation of events.

I would now like to move to some more practical suggestions regarding "creeping disasters". Whatever their cause, such disasters invariably end as famines. Famines do not occur overnight; they are predictable: the consequences of a community's gradual restriction of access to food supplies.

Being predictable, they can be averted. We should contrast the distressing tardiness of response to Ethiopia"s famine victims with the fact that in India for over four decades famine has been largely averted because the political and administrative system is geared to move food or cash tc the needy localities at the first indication of risk. Although the example of India may not be completely translated into Africa or other regions, I believe its relevance tends to be ignored because everyone takes it for granted, not noting the well-executed, systematic relief efforts that occur.

From our point of view, as external donors of emergency assistance, we would like to emphasise the still undeveloped potential for famine prevention, which is in large measure contingent upon rapid decision-making and programmatic flexibility of a major emergency donor like the U.S. Government. We would suggest that an emergency prevention component be built into AID's regular annual development assistance plan for those regions which are manifestly threatened by a disaster of gradual onset. Such planning should automaticaly make provision for the rapid development of programs such as food or cash for work while closely monitoring an enhanced early warning system. CRS would welcome the opportunity to participate in such planning and programming for famine prevention.

We also hope that the very welcome initiative to expand the capabilities of the Office for Foreign Disaster Assistance will consider the need for a more permanent structure to co-ordinate and expedite decisions from the inevitable variety of government agencies that become involved in emergency programs.

Even during a major disaster, as in Ethiopia or Sudan, minimising migration remains the goal from which all sound relief planning must flow. In essence, food and other assistance should be taken to the people, and not the people to the food. This makes for a potentially very complex system of logistics, accountability and communications and places high demands on the quality of staff.

Rehabilitation is the final stage in the chronology of a relief effort. If the aim of relief is to render those affected less vulnerable to a recurrence of the disaster, then it is the obligation of the relief manager to plan, from the earliest stages of the disaster for an extended rehabilitation effort which seeks to restore peoples' productive capability as soon as possible and then to mount programs of longer term development assistance. In Ethiopia, for example, our relief effort consists not only of food distribution, but also the simultaneous provision of seeds, tools, water supply and a lengthier process of developing health facilities and environmental improvement. All these intervention, it goes without saying, require money, time, good planning and skillfully orchestrated execution.

It would be appropriate at this stage to comment on some political aspects of emergency work. To us, it seems logical that a "creeping disaster" is one which has been allowed to occur and the response to which will be fraught with political obstacles. In famines where civil strife is a major cause, food relief can easily become the cannon fodder of those who seek to profit from humanitarian assistance. In such circumstances, where it has not been possible to prevent famine, we at CRS take a very single-minded view. It is the victims who are the prime focus and our every effort will be directed to getting assistance to them, regardless of the political climate, so long as we can possibly mount an operation.

Finally, of course, any society's need for externally provided emergency assistance is proportionate to that government's inability to provide the most fuindamental security of all: protection from the ravages of hunger. Perhaps, the most significant contribution to be made to the improvement of emergency responses is to develop the capacity of those emergency-prone countries to prepare for timely reactions based on indicators of impending emergency.

PREPARED STATEMENT OF JEAN MAYER, PRESIDENT, TUFTS UNIVERSITY

Mr. Chairman and Members of the Committee:

I appreciate the opportunity to comment on food security in Africa. My comments will be brief.

We realize that the solution sought by African nations, international agencies and foreign donors must respond to an extremely complex problem. While food security captured our attention in 1973 and 1985, it is but one of many variables including climatic and environmental, agricultural, marketing (including international marketing), and general economic factors, and the political priorities of national governments, involved in realizing sustainable rural development. We know for an unfortunate certainty that famine will continue to occur in Africa in the next 5 to 10 years, even in those areas where military operations are not taking place. If the international community and the famine-prone countries act wisely and forcefully, we may learn how to eradicate famine in the next 10 to 20 years.

The Agency for International Development should be congratulated for taking the lead among the foreign donors in adopting a comprehensive and systematic strategy for technical assistance in the context of policy reform appropriate to the individual nations of Africa.

AID's Famine Early Warning System can be used as a base for preventing and if that fails better managing food crises in the short term. But of still greater importance for humanity is the opportunity FEWS provides of generating the basic information needed to understand the multiple causes of famine. When fully developed FEWS will enable its users quickly and with continuity to organize key information into a form which policy makers can use. The key here is to learn how to make the information user-friendly when there are competing demands and the users are both national and international. The fully developed FEWS can provide guidance to the same policy makers in appropriately adjusting their national policies...policies so complex that subsidized market prices or misguided capital expenditures or a seemingly unrelated policy may inadvertently aggravate a food crisis if not actually cause it. It can also guide them in preparing alternative strategies anticipating and dealing with both the causes and consequences of famine in each famine prone nation or region of Africa. Lastly, FEWS can help us understand famine prevention in a way that makes it an integral element of long term rural development in Africa.

Food security is an intricate, difficult problem having momentous implications for Africa, and as a global family, for all of us. AID deserves your wholehearted support.

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